

American Artisan *and* Hardware Record

Sheet Metal—Roofing—Warm Air Furnaces—Stoves

Vol. 92, No. 3

CHICAGO, JULY 17, 1926

\$2.00 Per Year

PROMPT SERVICE!

TIN PLATE

for
Warm Air Heater
Pipe and Fittings

Large Complete Stocks
of
Diversified Sizes

at
CHICAGO
PITTSBURGH
NEW YORK

MEMO

*Write
for
prices
today*



TIN PLATE

C. S. DAVIS AND COMPANY, INC.
37th and Iron Streets CHICAGO, ILLINOIS

TIN PLATE

Warehouses at CHICAGO - PITTSBURGH - NEW YORK



Even Youngsters Recognize the QUALITY

The Value of Being a Homer Dealer

It is the experience of every Homer Furnace dealer, whether they have been with the company since its organization or whether they are but youngsters from the point of service, that the National recognition of Homer Furnaces as leaders invariably becomes an asset in the promotion of sales.

Wherever Homer Furnaces are introduced in a community, it is but a reasonably short time before they take their usual position as leaders of warm air heating plants in the territory. Confidence in the experience of other Homer dealers plus a "go get 'em" attitude will result in the increase of your business to a very marked degree.

Write today for full particulars about our dealers' plan and how our "year to pay" plan handled within our own organization will make you a leader in your community among the dealers of warm air heating plants.

SALES & SERVICE

PLINT, MICHIGAN

May 24, 1926

Mr. C. B. Strong, Vice Pres.,
Homer Furnace Company,
Coldwater, Mich.

My dear Bruce,

As you are aware, we are only youngsters in the Homer Family, but we want to take this occasion to compliment you and your associates on the wonderful organization you have perfected.

As you know, Flint, Michigan has been sadly neglected the past few years but we are, I am glad to say, putting the "Homer Furnace" to the front and we expect before the year ends to plant the Homer Flag in the front ranks where it belongs. To all prospective dealers, we most heartily recommend the Homer Furnace Company and its products.

Wishing you continued success with best wishes,
we are

HOMER FURNACE CO. SALES & SERVICE
Prattice

By *[Signature]* Practitioner

What's home without a Homer

Capacity over 30,000 Furnaces Annually

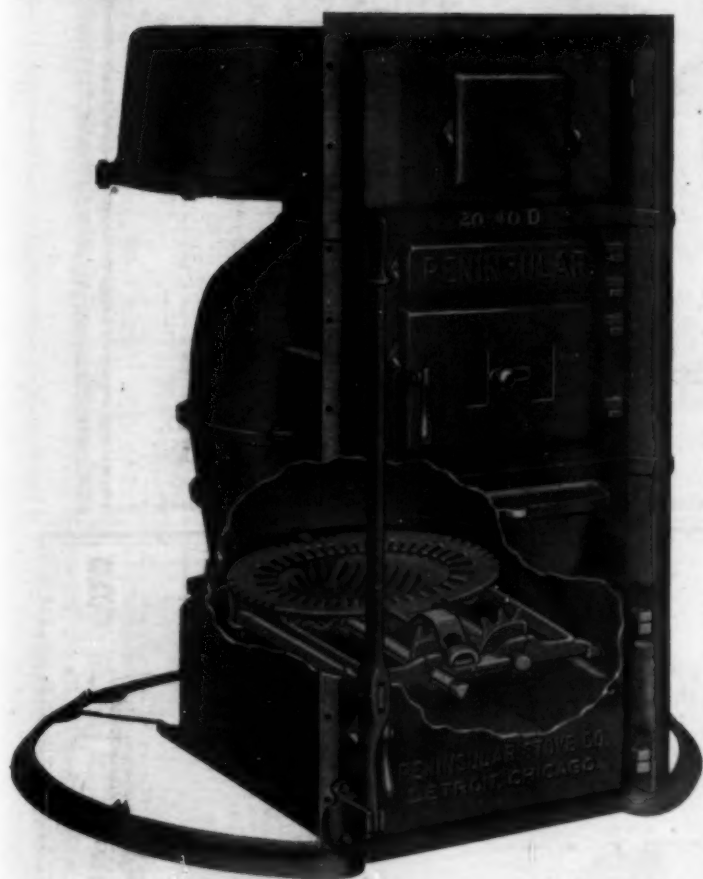
THERE'S HARMONY IN
HOMER HEATED HOMES

*"What's home
without a Homer"*

HOMER FURNACE CO., Coldwater, Mich., U. S. A.

HOMER FURNACE CO., PORTLAND ORE., Pacific Coast Distributors
THE CINCINNATI SHEET METAL & ROOFING CO., CINCINNATI, OHIO, Southern Distributors
JANNEY, SEMPLE, HILL & CO., MINNEAPOLIS, MINN., Northwestern Distributors
M. A. KARP & SON, 183-6th Ave., NEW YORK, N. Y., Eastern Distributors
MILWAUKEE STOVE & FURNACE REPAIR CO., MILWAUKEE, WIS., Eastern Wisconsin Distributors
SKINNER MACHINERY COMPANY, DUNEDIN, FLA., Florida Distributors
THE AETNA MANUFACTURERS SALES COMPANY, NEW HAVEN, CONN., Northeastern Distributors
LEITER BUILDING STORES, INC., State, Van Buren and Congress Sts., Chicago Distributors
THE HOMER-RYAN-COOPER CO., POUGHKEEPSIE, N. Y., Hudson River Valley Distributors

*The New
and Greater* **20-40 D**
Model
PENINSULAR FURNACE



Over \$50,000

was spent in designing, perfecting and testing this new 20-40D Furnace. But it's a furnace and a heater you'll do real business with. Tell us to talk 20-40D to you now—it's an achievement that means profits to you.

*a Super Heater
and why—*

1. Square ash pit—ashes easily removed.
2. Duplex Grate with outside shaker—don't have to open ash pit door to shake furnace, may be done in a standing position, easy to keep ashes away from outside of fire.
3. Very large flanges on fire-pots to allow plenty of room for expansion and contraction.
4. Opening at top of feed section is as large as both sides of radiator, making for wonderful combustion.
5. To clean out furnace simply lift off clean-out door and insert brush. The bottom of radiator is practically flush with bottom of clean-out.
6. Very large double feed door.
7. Space for air passage between radiator and feed section very large. This is the main reason why it is a super heater.

Write for interesting special circular today

The PENINSULAR STOVE COMPANY
DETROIT CHICAGO

Easy To Sell---Stay Sold



"Sell What the Public Wants"

If you sell what the public wants, it stays sold. Western Boiler Plate Furnaces are easy to sell because they are built to a common sense practical design. Surprisingly reasonable in cost, durable and very economical to operate.

They stay sold because genuine value is built into every part of them. They are designed and constructed to give permanent satisfaction to the user and protected by an absolute iron clad guarantee.

"Western" boiler plate

Furnaces are

Permanently gas tight. Built of heavy copper bearing boiler plate, with joints cold riveted and calked, making the tightest and most durable construction known.

Economical in operation. Designed on a common sense plan, without useless frills, but including the essentials of economical combustion—hot blast gas consumer, V-baffle in radiator, large brushing surface.

Economical in first cost. Although quality is built into every part of the Western, its price is such that it even competes with a cast furnace.

Ask for our special dealer's proposition which includes long profits, easy terms, and a special selling plan with many advertising helps.

Western Steel Products Co.

Duluth, Minn.

Minneapolis, Minn.

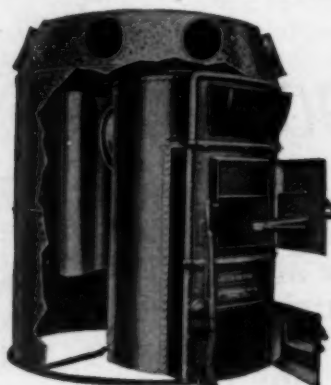
Standard Dealers Know in Advance



9 styles and 47 sizes of steel and cast iron furnaces carried in stock at all times. Nowhere else can you find such a variety to select from.

They are sufficient to meet demands from all classes of trade.

THAT every buyer will become a Booster. The furnaces shown on this page have proven their ability to return dollar for dollar to the consumer in extra service rendered. Standard Dealers are also assured of real profits by our Dealer Plan, which is different.



Furnace Supplies, such as the following, are nationally known as the Standard of Comparison;

HANDY PIPE & FITTINGS
R I NO STREAK REGISTERS
H & C No. 170--No. 190 REGISTERS
STAN-CO REGISTERS
STEEL & SEMI STEEL REGISTERS
WISS SNIPS
PEXTO TOOLS

Everything needed by the Furnace Installer

STANDARD FURNACE & SUPPLY CO.

OMAHA, NEBR.

Warehouse — Sioux City, Ia.

Mention AMERICAN ARTISAN in your reply—Thank you!

Creating a Demand For SMOKELESS Heating



Reproduction of Half Page Advertisement in the SATURDAY EVENING POST

Few people realize that SMOKE is FUEL. Smoke is composed largely of carbon which is rich in heat value, and allowing it to escape unused up the flue means a serious waste of fuel.

We are telling the public, through the medium of the SATURDAY EVENING POST, of the high cost of smoke, and how this waste can be eliminated by installing the SUPER-SMOKELESS Furnace that *burns its own smoke*.

This advertising is creating a big demand for SUPER-SMOKELESS Furnaces. The dealer who sells them is in a distinct class—actually above competition. He can increase his business and get good prices for his work.

It will pay you to write TODAY for full information about our Exclusive Dealer Proposition and Utica Merchandising Plan

UTICA HEATER COMPANY

"Pioneers in Smokeless Combustion"

UTICA, N. Y.

CHICAGO, ILL.



The "AFCO" Furnace Is Built For Oil Burner Installation

Fact No. 6 Watch for No. 7
in an early issue

The increasing use of oil as a fuel for home heating is showing home owners the necessity of buying tightly constructed Boiler Plate Furnaces.

"AFCO" Furnaces have stood the most severe oil burning tests. The heavy boiler plate, riveted construction absolutely prevents the leakage of gas fumes into the circulating system as there are no cemented joints in the furnace body.

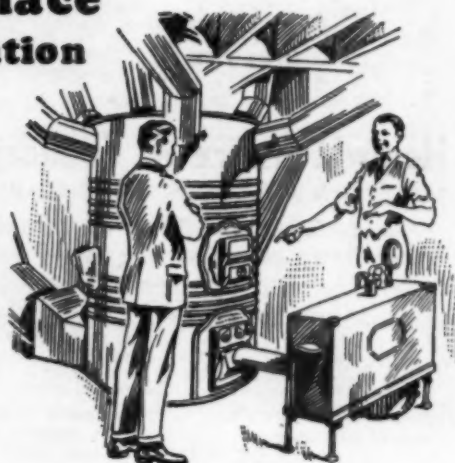
It cuts the fuel bill because all the heat units are utilized in heating the home—the flue gas temperature is reduced to a minimum—there is no back fire or smoke through the feed or ash pouches when the chimney is cold—the scientific construction of "AFCO" Furnaces eliminates this problem.

Tell your home building friends about "AFCO" Boiler Plate Furnaces. The few extra dollars in first cost will be returned to them ten fold in the saving of fuel and they will own a real heating plant, free of all worry and annoyance.

Let us help you sell "AFCO" Furnaces. You will make more money and every owner will be a booster for you.

Send today for our new book "Healthful Heating" and our special dealer proposition

American Furnace Co.
2719-31 Morgan St. Dept. 34 St. Louis, Mo.



The "AFCO" Furnace

Is

"Built Like a Power Boiler"



They Work With You

IT'S a great thing to install a furnace that just seems to work with you instead of putting up a continual fight against going together right.

It's a great thing to have a furnace that will work for you and talk for you after it has gone up, year after year.

The Moncrief is that kind of furnace, the kind of furnace that helps you build a good business.

*Drop us a line today
for further particulars*

The

Henry Furnace & Foundry Co.

3471 E. 49th Street

CLEVELAND, OHIO

*Manufacturers of single and double wall pipe
and fittings, galvanized pipe and fittings, etc.*

Eastern Sales Offices:

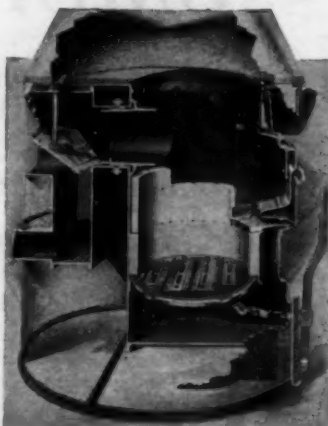
F. H. HANLON W. S. McCREA
Batavia, New York 105 Federal St., N. S., Pittsburgh, Pa.

Western and Southern Distributors:

JOHNSON FURNACE CO. MONCRIEF FURNACE CO.
Kansas City, Missouri Atlanta, Ga.
MONCRIEF FURNACE & MFG. CO.
Dallas, Texas

MONCRIEF FURNACES

The Williamson BOILER PLATE FURNACE



In adding the Boiler Plate Furnace to its line, this company is merely extending into the steel furnace field the leadership which it has attained in the manufacture of cast furnaces.

The Williamson Boiler Plate has exclusive features which instantly remove it from the ordinary furnace of this type.

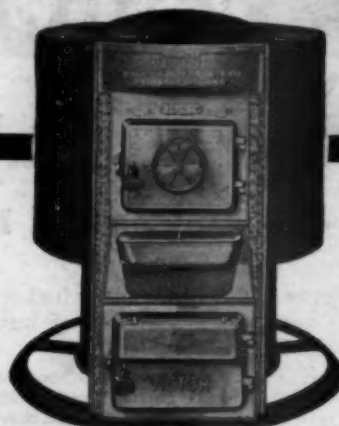
It is all-welded, making it permanent—gas and dust tight. Dome made from copper-bearing, blue-annealed locomotive firebox steel—radiator made from Armco iron. Double baffle in radiator splits the hot gases into two streams so that all radiating surface is fully utilized—an exclusive feature. Hot-blast smoke-consumer in door and special vents in fire-brick lining supply hot oxygen directly over the flames, consuming all the heat elements in the fuel. Designed with the demands of the oil burner in mind, making it ideally adapted to any fuel.

Guaranteed for 10 Years

Many other attractive features further emphasize the superiority of the Williamson Boiler Plate Furnace. New and interesting sales policy gladly submitted. Make sure of your territory NOW.

The Williamson Heater Co.
Cincinnati, Ohio

THE NEW HALL-NEAL VICTOR FURNACE



Patented
Jan. 2, 1923

you really ought to know!

It will pay you as a furnace dealer to see a booklet of more than 150 enthusiastic testimonial statements—just published—from users of the New Hall-Neal Victor Furnace.

This furnace has Intercepting Heat Conveyors—a new and better radiator design which greatly increases heating efficiency.

And the reported experience of owners will show you what a great business opportunity this furnace offers for you. Write today for a copy—and for a complete explanation of this great improvement in warm air heating.

HALL-NEAL FURNACE COMPANY
1322-32 N. Capitol Ave. Indianapolis
*Builders of Hall-Neal Victor Boiler Plate Furnaces
for more than a Quarter Century.*

Lennox Torrid Zone Furnace

FIRST

- steel furnace to have direct-indirect draft.
- in originating quantity discount—
- to originate ten year guarantee.

FOR over thirty years the Torrid Zone has been *first* in originating the most efficient and practical features in steel furnace construction. There are many imitations of the Torrid Zone on the market, but a close comparison will show you that



Torrid Zone high quality and design embodying many exclusive patented features of great importance to efficient heating CAN NOT BE DUPLICATED.

BEFORE you take on a steel furnace agency be sure to compare construction in detail. The Torrid Zone has been manufactured for over thirty years. It is made by the world's largest manufacturers of steel furnaces. It is produced in plants employing the largest and most up-to-date manufacturing facilities. It is made by a reliable company of sound finances. The Torrid Zone Type E illustrated is the latest thing in high grade furnace construction and design. It is enjoying wide-spread sale. It is fairly priced. Remember too that behind the Torrid Zone Agency the Lennox Furnace Company puts a wealth of sound, practical result-getting sales co-operation and advertising.

You can be **sure** of quality, reliability and profits with the Torrid Zone.

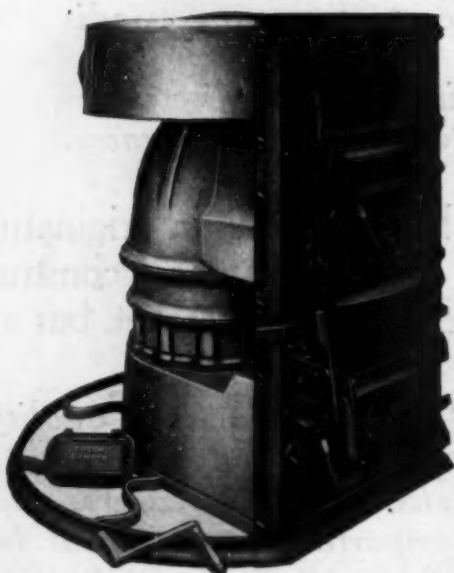
Write today for our complete literature

The Lennox Furnace Company
Marshalltown, Iowa Syracuse, New York

When writing mention AMERICAN ARTISAN—Thank you!

LINCOLN
WORTHY OF THE NAME
FURNACE

**Worthy
of the Name!**



THE Lincoln Furnace is a real advance in warm air furnace construction. It is dust and gas tight. It has all joints covered. Its one piece radiator has all collars cast on. The feed section comes through the front. Large upright shaker operates Duplex shaking and dumping grates.

Worthy Features

1. Covered joints
2. Front shaker
3. One piece radiator with all collars cast on
4. Feed section through front
5. Duplex grates

Write for Catalog and Prices

**The American Foundry
& Furnace Company**

Dept. 400

BLOOMINGTON, ILL.

WISE
FURNACES



THE construction of the Wise furnace is something more than castings fitted together. Such important details as design and proportion of the radiator and fire pot on Wise furnaces show that in these points of construction, as well as all other features, great care has been taken to have them scientifically correct.

Proper, satisfactory heating can only be had from furnaces that can produce correct combustion. And not only this—a furnace must also have a great area of heating surface and large even flow of air circulation.

Wise furnaces are designed to give superior heating service and they are constructed of the best grade iron.

*OUR catalog gives full details
and our agency proposition
will interest you. Write for
complete information today.*

The WISE FURNACE CO.
AKRON, OHIO

BOOMER

THIS is our latest addition to the Boomer line. We heartily recommend it for your favorable consideration.

The severe tests we have given this furnace have proven its durability. The unsolicited reports we received from users last winter have been most flattering.

For durability, economy, easy to operate, easy to set up and the low price at which we offer this furnace, you will make no mistake in arranging for the agency.

THE HESS-SNYDER CO.
MASSILLON, OHIO

Makers of BOOMER FURNACES for Forty-Three Years



QUEEN FURNACES ARE BEST

For Your
Prospect

OR

For
Yourself

BECAUSE

They provide rapid circulation of air, perfect combustion, convenient and efficient air moistener, smoke pipe which can be taken off at any angle, flat or triangular grates, and suitability to any fuel.

Floral City Heater Co.
Main Office:
MONROE, MICHIGAN



BECAUSE

They possess undisputed exceptional merit, our guarantee of long service, exclusive features and adaptability to any job. We sell only to the trade. Write today for catalog, agency proposition and merchandising helps.

Floral City Heater Co.
1654 Monadnock Bldg.,
CHICAGO, ILL.

The latest news about the Warm Air Heating Industry is to be found in this Journal every week.

This is the only trade Journal covering this field published every week.



WALWORTH CASING RINGS

Made of Steel

Guaranteed Exact Measurements and True Circles

Our long years of experience and modern equipment enable us to make these casing rings high grade in every respect and fully guarantee them.

Walworth Casing Rings are made to individual requirements and measurements, full circles for ordinary use and partial circles for full cast fronts. With lugs for Double Casing and without lugs for Single Casing. Write today for descriptive circular and prices.

Made by the makers of Walworth Double Gratings, Semi-Steel Registers, Ventilators, Borders, Side Wall and Base Board Registers

THE WALWORTH RUN FOUNDRY COMPANY

West 27th St. and N. Y. C. & St. L. R. R., Cleveland, O.

Distributors: ROBINSON FURNACE CO., Chicago, Ill.; HART MFG. COMPANY, Louisville, Ky.; PHILLIPS & BUTTORFF MFG. COMPANY, Nashville, Tenn. Eastern Representative: PENN TINSMITH'S SUPPLY CO., Philadelphia, Pa.

The Improved Air Duct Increases the Heating Capacity about 30 per cent in our

WASHINGTON HOME FURNACE



Placed above floor, hence saves the cost of digging cellar. Produces circulating moist heat for 3 to 6 rooms. Only stove or furnace ever built without name plate or advertisement on the outside. (Name is molded on inside of front feed door.) Beautiful grained mahogany finish harmonizes with finest mahogany furniture. (Also in plain finish for one-third less.) Made in the same plant in which we manufacture 100,000 Washington stoves and ranges annually. Can ship promptly as we now manufacture fifty furnaces per day. Nationally Recognized and Advertised. Correct location of water pan. Most beautiful and most expensively constructed furnace now on the market. Write today for exclusive agency plan, your district may be open.

Gray & Dudley Company, Nashville, Tennessee

"We melt more than 100,000 Pounds of Southern Pig Iron per Day"

"American Seal" FURNACE CEMENT

*Roof Cement — Stove Putty
Plumbers Putty*

PAINTS and SPECIALTIES

WILLIAM CONNORS PAINT MFG. CO.
TROY NEW YORK

Established 1852

JAMES L. PERKINS
Western Distributor
140 S. Dearborn St., Chicago, Ill.

ROBINSON SMOKE CONSUMER

FITS ANY
FURNACE

—
SAVES
FUEL

—
EASY TO
INSTALL



PUT one on every furnace job—easy to sell and you make good profits. It is economical and will make better satisfied customers.

Write today for full details

The A. H. ROBINSON CO.

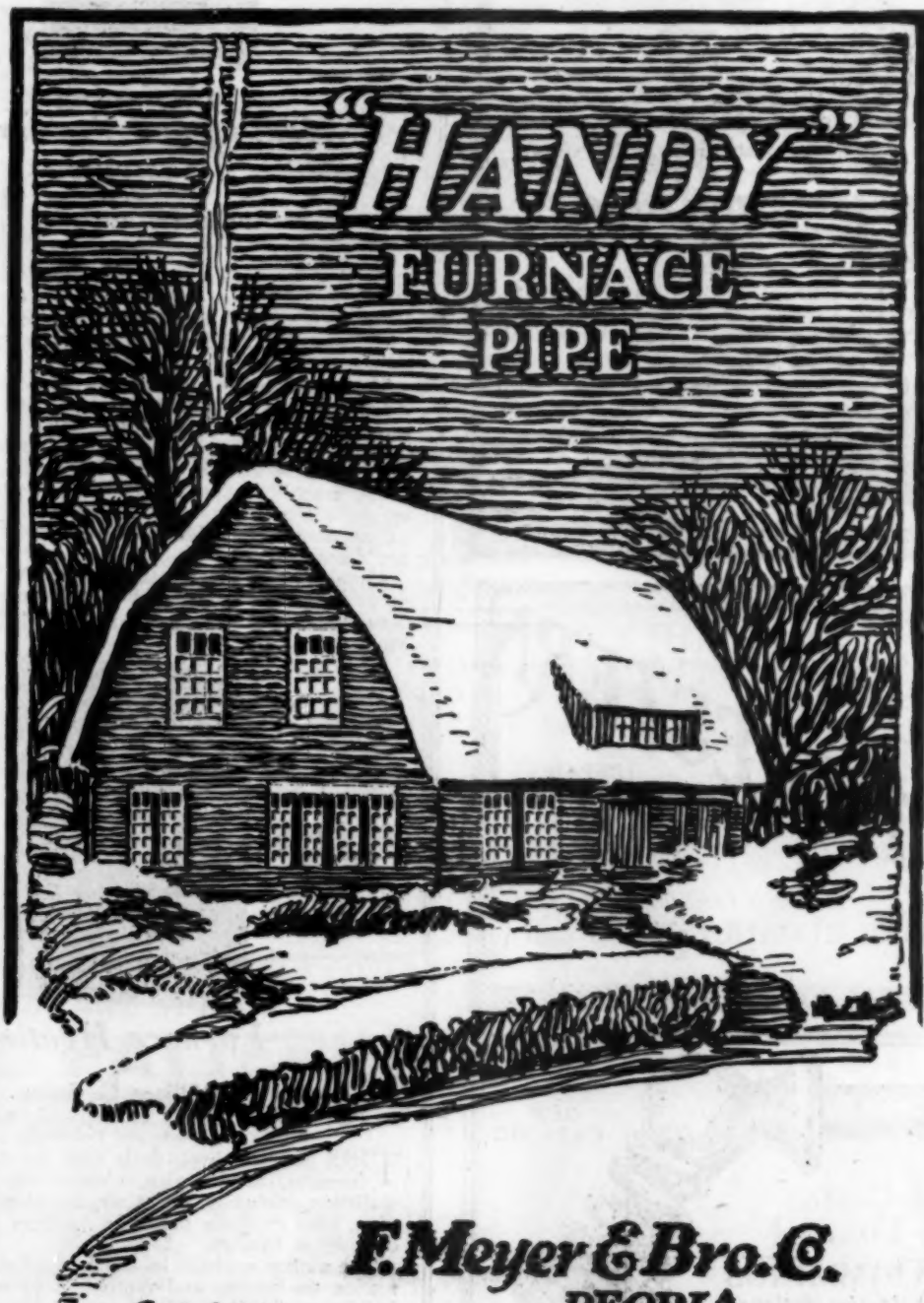
Makers of the ROBINSON
STEEL FURNACES

5103 Detroit Avenue

Patented CLEVELAND - - - OHIO

Mention AMERICAN ARTISAN in your reply—Thank you!

There's something NEW in
THE NEW CATALOGUE
of the
NEW FRICTIONLESS



F. Meyer & Bro. Co.
PEORIA
ILLINOIS

Catalogue
No. 45

Now ready. Send for your copy

When writing mention AMERICAN ARTISAN—Thank you!

A restful night on Lake Erie

on one of the great ships of the **C & B Line** makes a pleasant break in your journey. A good bed in a clean, cool stateroom, a long, sound sleep and an appetizing breakfast in the morning.

Steamers

"SEEANDBEE" — "CITY OF ERIE" — "CITY OF BUFFALO"
Daily May 1st to November 14th

Eastern Standard Time

Leave Cleveland—9:00 P. M. | Leave Buffalo— 9:00 P. M.
Arrive Buffalo—*7:00 A. M. | Arrive Cleveland *7:00 A. M.

*Steamer "CITY OF BUFFALO" arrives 7:30 A. M.

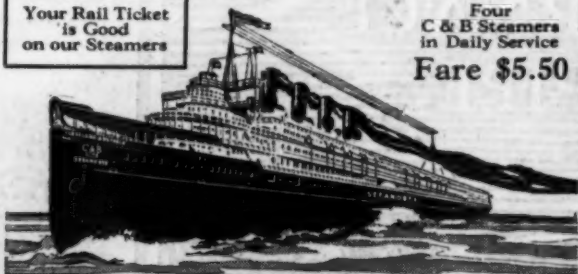
Connections for Niagara Falls, Eastern and Canadian points. Ask your ticket agent or tourist agency for tickets via C & B Line. New Tourist Automobile Rate \$7.50 and up.

Send for free sectional puzzle chart of the Great Ship "SEEANDBEE" and 32-page booklet.

The Cleveland and Buffalo Transit Co.
Cleveland, Ohio

Your Rail Ticket
is Good
on our Steamers

Four
C & B Steamers
in Daily Service
Fare \$5.50



Send for our
illustrated book
of order
blanks

NORTHWESTERN

REPAIRS
FOR ALL
STOVES
FURNACES
BOILERS

The Oldest and Largest
STOVE REPAIR CO., Chicago



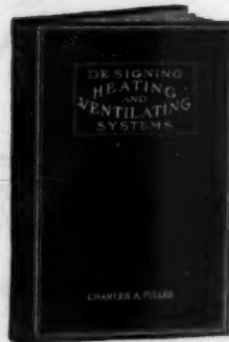
High Grade
Finely Finished
STOVE TRIMMINGS
Original, distinctive designs

IF YOU want superior quality and real
service at prices that can't be beat—
SEE US NOW

THE FANNER MFG. CO.
Brookside Park CLEVELAND, OHIO

WRITE
FOR
OUR
CATALOG

Books to read Now!



245 Pages,
6x9 ins.

89 Figures—
Cloth, \$3.00

Designing Heating and Ventilating Systems

By

Charles A. Fuller
Consulting Engineer

THIS new edition, treats the practical application of engineering rules and formulas in every day use, in laying out steam, hot water, furnace and ventilating equipment for buildings of all kinds, presented in a simple manner.

This book explains the heat unit, foot pound and similar measures in such a way that the less technical mind can readily understand and apply them.

It also explains in detail exactly the same methods that the leading engineers use in determining the sizes and proportions of equipment in every day work. The quickest and easiest methods of determining the proper amount of radiator surface for a room or building of any size are described.

Plumbing and Heating Contractors will find it an invaluable reference book. Every phase of Heating and Ventilating treated is developed along the lines of the most recent practice.



258 Pages,
6x9 ins.

77 Figures—
Cloth, \$3.00

Furnace Heating

By

William G. Snow

Member: American Society of Mechanical Engineers; American Society of Heating and Ventilating Engineers

THIS practical book deals with the different types of furnaces, their design, construction and proper installation, including warm air, combination heating systems, also covering the main features of the one pipe or pipeless furnace.

The author explains in simple English practical information on heating and ventilation of school and public buildings, churches, stores, etc. He also covers the setting up of furnaces, and describes all types of furnace fittings.

AMERICAN ARTISAN
620 S. Michigan Ave., Chicago, Ill.

This Pipe gives better service

JUST take two sections of Chicago Pipe and snap them together—see for yourself how easily, quickly and firmly they fit together—see how strong CHICAGO Pipe is made and notice the extra weight and high quality of the material.

Yes, we will send sample—just write today for our Catalog No. 22 and price list.

CHICAGO FURNACE SUPPLY CO.

1276-78-80-82 Clybourn Ave.
CHICAGO



CHICAGO
FURNACE PIPE
AND FITTINGS

BOLTS

WE MANUFACTURE A COMPLETE LINE OF BOLT PRODUCTS, INCLUDING STOVE BOLTS, CARRIAGE BOLTS, MACHINE BOLTS, LAG BOLTS, NUTS, ETC. ALSO STOVE RODS, SMALL RIVETS AND HINGE PINS, CATALOG ON REQUEST.

THE KIRK-LATTY MFG. CO.
1971 W. 85th St. Cleveland, O.

IRON AND WOOD
STOVE PATTERNS
QUINCY PATTERN COMPANY
QUINCY, ILLINOIS

P A T T E R N S
FOR STOVES AND HEATERS
VEDDER PATTERN WORKS
FIRST-CLASS IN WOOD and IRON
ESTABLISHED 1833 TROY, N. Y.

PATTERNS FOR STOVES AND HEATERS
THE CLEVELAND CASTINGS PATTERN COMPANY
CLEVELAND, OHIO

ATASCO QUALITY STAMPINGS and STOVE TRIMMINGS

THE kind that only a completely equipped plant (open hearth to finished product) such as ours can properly produce and vouch for.

We know exactly the grade of material used for every part made, and guarantee the quality and workmanship in every stove trimming or stamped part manufactured by us.

Give us a trial. No part too complicated—send us your blue prints.

THE AMERICAN TUBE & STAMPING COMPANY
BRIDGEPORT CONNECTICUT

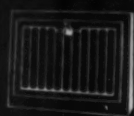
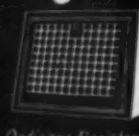
Branch offices in all principal cities



THE AIR CAPACITY LINE!

An Oil Can makes a poor Drinking Cup!

It might hold just as much as a glass tumbler, but the small opening restricts the flow. It's the same with the fretwork on an ordinary register that restricts the free flow of air.



H&C Register No. 19274

Which of the two registers illustrated allows the freer flow? It's the air that gets through that counts!

THE HART & COOLEY COMPANY, INC.
NEW YORK NEW BRITAIN, CONN. PHILADELPHIA CHICAGO BOSTON

Published to serve
the
Warm Air Furnace,
Sheet Metal, Roofing,
Stove and Hardware
Industries

Founded 1880

American Artisan and Hardware Record

Yearly Subscription
Price:
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Canada . . . \$3.00
Foreign . . . \$4.00

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CHICAGO, JULY 17, 1926.

\$2.00 Per Year.

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AN ACHIEVEMENT

An explanatory note regarding service to readers of AMERICAN ARTISAN. This paper is now nearing the completion of a half century of service. For almost fifty years it has catered to the needs of the men in the industries which it represents. At no time during its long and successful career has AMERICAN ARTISAN been in a better position to render complete, adequate service to its readers than it is today. In addition to the matter contained in our regular weekly publication, we maintain Service Departments for the use of our readers. If you have a problem to solve, we courteously invite you to submit it to us for solution. In what better way can we learn of your problems than from you direct?

A word to
pass on to
the house
builder



Satisfaction

Surrounding your family with an abundant supply of pure warm air at low initial cost plus economy of operation, is true heating satisfaction.

You will appreciate a Thatcher Meteor Furnace. From the minute the fire is started, healthful heat is supplied in sufficient abundance to make every room warm and comfortable.



THE THATCHER
"METEOR" FURNACE

Thatcher "Meteor" Furnace

is dust-proof, gas-tight, efficient in operation and economical in fuel consumption—and appeals particularly to dealers because its high two-piece cast front and solid one-piece base plate make it unusually easy to erect.

By installing a Thatcher "Meteor" Furnace you are giving your customer an efficient, economical, healthful and easily operated furnace—one that will burn hard or soft coal with equal efficiency—and will assure him of heating comfort at all times throughout its long life.

The combustion chamber is of ample size for heavy and efficient firing and for combustion of the coal gases; its large double feed door makes the fire accessible at all points.

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* * * *

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LAMNECK PIPE AND FITTINGS



American Artisan and Hardware Record



Vol. 92.

CHICAGO, JULY 17, 1926

No. 3.



A Moderate Sized Bungalow Type Private Dwelling Which the Owner Thought Well Enough of to Protect with a Sheet Metal Standing-Seam Roof. This House Represents One of the 95 Per Cent in New Braunfels, Texas, That Are Equally Well Protected with Sheet Metal

Fire Insurance Rates Reduced 400 Per Cent in 30 Years in Texas Community

In Addition to the Direct Money Saving There Is, Too, the Unexampled Protection

By GEORGE J. DUERR

SEVERAL weeks ago there was presented to readers of AMERICAN ARTISAN a story of unusual interest, telling how the people of New Braunfels, Texas, had put on a campaign to reduce fire insurance rates on property such as dwelling houses, barns and other structures subject to the ravages of fire. This campaign, it was revealed, extended over a period of more than thirty years and during that time fire insurance rates had been reduced over 400 per cent.

That story further purported to show what a great part the sheet metal roof had played in that campaign. There were several illustrations with this story, one a panoramic view of the city of New Braunfels itself, showing as far as the eye could see on all sides dwell-

ings roofed with sheet metal.

However, in that article space did not permit the showing of many other individual illustrations of private homes roofed with sheet metal. Therefore in this article several illustrations of these dwellings are shown.

Reliable data on fire losses place sparks on roofs and defective flues as the two leading causes. Lightning striking the house or barn, of course, takes its place in the front rank in the rural communities at least. The wonderful thing about this New Braunfels story is that it tells a marvelous tale of how that city has almost eliminated the possibility of fire from sparks on roofs. This feat has been accomplished by covering 95 per cent of the buildings there with sheet metal. This

New Braunfels story reads like an Arabian Knight's tale. To a sheet metal contractor it is decidedly more exciting. It is the most consistent record of reduction of fire loss for a community that has to date been placed on record.

There is a certain unalloyed inspiration in this New Braunfels story which has prompted us to come back to it again after presenting a story concerning it some time ago. The big thing is that it shows what can be done when the spirit to do is back of it.

New Braunfels, Texas, as a city is no more favored than any other progressive American city of its size and population. But oh how proud the sheet metal contractors in that city must be of their accomplishment! They have a right to



—Photos Courtesy Sheet Steel Trade Extension Committee.

Large Family Dwelling in New Braunfels, Texas, Fully Covered with a Standing Seam Sheet Metal Roof. Note the Neatness of Appearance of This Job. The Garage Is Also Covered with the Same Material

be proud. They have really done something. They have built something that will stand the test of time—a monument to their genius, aggressiveness and desire to be of service to their fellow men. Sheet metal contractors in other parts of the country should set this experience up as an example, an inspiration, a goal or Mecca toward which to strive in their own communities.

We hear a lot of talk about difference in costs, as if a real honest to goodness service could ever be measured in dollars and cents. But even if we do discuss costs, there is nothing to fear. It is only necessary to be sure that all costs and benefits are given proper credit.

When a metal roof is considered, even the architect may say, "It is expensive." But sheet steel is the one metal roof that is not expensive. Please note costs in the New Braunfels story. In connection with cost, we should like to call attention to the following revised figures, which have been obtained from weighing cost figures collected from contractors of roofing over the country. They will vary considerably in different sections, due to costs of labor, material and transportation. Figures are per unit of 100 square feet of roofing in place on the building.

Galvanized corrugated sheet steel, \$8.00 to \$9.00.

Galvanized flat sheet steel standing seam, \$9.00 to \$14.00.

Galvanized sheet steel shingle, \$15.00 to \$18.00.

Galvanized Spanish sheet steel tile, \$20.00 to \$30.00.

Another question that is often raised is "How about appearance?" A wide choice may be had in style of sheet steel roofs—standing seam, shingle, Spanish tile, and enameled tile (in color). The sheet steel roof

in every respect to other forms of roofing and is in a class by itself as regards competition.

However the sheet metal contractor comes in contact with all classes of people, whose prejudices he is sometimes unable to overcome. This fact should not deter him, however,



Small Private Dwelling Completely Roofed with Sheet Metal. Rather a Difficult Job, But Very Neatly Accomplished

today is distinctly one of beauty and durability.

Of particular importance to buildings in open places, it should be stated that a sheet steel roof, properly grounded, is absolute protection against lightning. On the farm, lightning leads the causes of fires, being responsible for losses of 14½ per cent of the total.

L. F. Diddie Company Issues Important Material on Copper Lightning Rods

The sheet metal contractor is primarily interested in marketing sheet metal in its various forms. This material is unquestionably superior

from counselling the home owner against loss by fire caused by lightning striking his home.

If the customer remains adamant and turns a deaf ear to all of the contractor's pleas for an opportunity to give him the protection which only the sheet metal roof can give, the contractor should then not fail to bring up the subject of lightning rods.

The lightning rod for a barn not protected by a sheet metal roof is an absolute necessity. To avoid the disastrous consequences resulting from a bolt of lightning striking the barn or house a path must be provided for the lightning to pass from

the roof to the ground. And such a path is embodied in the lightning rod.

The L. F. Diddie Company, Marshfield, Wisconsin, have just recently issued some very enlight-

ening material on the subject of lightning rods which should be in the hands of every sheet metal contractor whose work is largely concerned with roofing and roofing materials. This company is the manu-

facturer of the Diddie—Blitzen rod and is, therefore, well qualified to speak on this very important subject.

A line to them will bring the information desired.

Some Reminiscences by Old Time Sheet Metal Contractor

Relates How Many Barns Have Been Saved from Fire Destruction by Sheet Metal Roof

By L. S. BONBRAKE

A HALF century ago in America there was not the splendid galaxy of roofing materials that are now perfected. The prevailing types were then tin, wood and slate shingles, while copper and lead were occasionally heard from.

In those days roofing was not given the respect and the attention it now receives; while research into methods, manners and merits was nil. The flat surfaces then to be covered consisted chiefly of the roofs of verandas and porches, converted with flat seam tin roofing and soldered to completion. Large surfaces, such as warehouses and sheds, were generally covered with a coal tar and gravel affair, which shed water on rainy days and coal tar on hot summer days. Many are the runs of eave-trough I have taken down to empty, which were breaking down under the weight of the tar collected in them from the roof.

Those old methods have now all passed away. New modes and materials of proved merit have sprung into existence.

While the great flurry of iron roofing in the 80's and 90's ended in disaster for a number of people, it taught a valuable lesson to others; namely, that a roof may be laid of black iron or steel on a surface having a one-third or one-fourth pitch and it will last very well, with proper attention to painting. It bears the same relation to iron sheets, as a lightning deflector, as does tin.

Five decades ago you could travel from one border of a mid-west or Ohio valley state to another and every barn which you passed on the way would be seen to have been covered with wood or occasionally slate shingles. Now in some localities at least conditions are directly reversed, brought about, no doubt, by the knowledge that if a ground connection is made, lightning can do no damage to the building covered with sheet metal. This truth

were struck were burned to the ground.

This elimination of the fire hazard from lightning became well known in Stark and Carroll counties, Ohio, and has been spreading to even wider areas since.

Sheet metal roofing is now coming back into its own. You can see evidences of this fact on every hand. Arthur Guelker, of Beardstown, Illinois, laid more Target and Arrow plate roofing last year

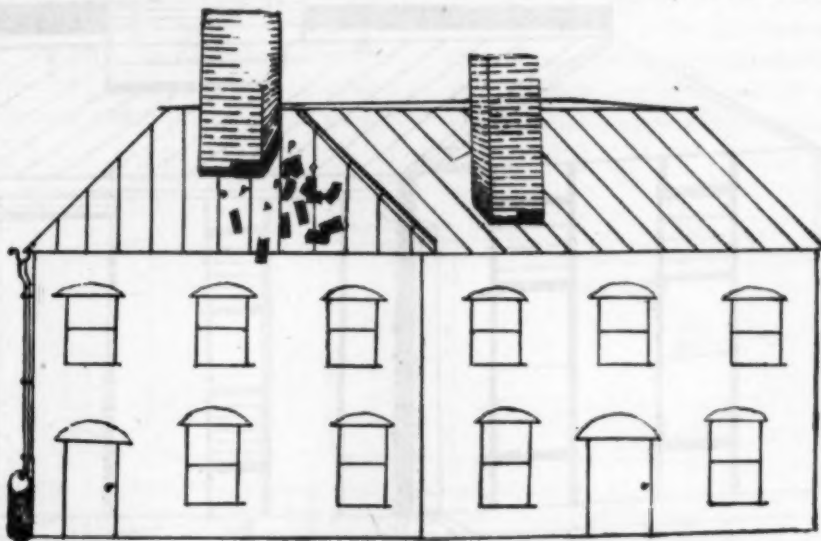


Figure 1.—Sketch of Building the Chimney of Which Was Struck by Lightning. The House Was Saved From Destruction by a Sheet Metal Roof

was satisfactorily established when many private dwellings and barns in Ohio were struck by lightning during the summer of '84. Each and every building that was covered with sheet metal which was struck did not take fire and escaped with only minor damage. Those having the wood shingle covering that

than he has of all brands put together in other years.

The drawing in Figure 1 indicates the hipped roof house, covered with sheet metal and owned by Jacob Keefer, Carroll county, Ohio, near Magnolia. Lightning first struck a corner of the chimney, tearing it out half way to the roof.

From this point the lightning appeared to make a jump to the roof. Here it scattered over the roof and found its way down the conductor pipe to the rain water barrel. The metal conductor ceased at the barrel and the lightning, having no further line of travel, damaged the weather boarding considerably before it was able to reach the ground.

At that time I was only a tinner's apprentice and was dispatched to the Keefer farm to solder up holes made by the falling brick. My experience on this occasion proved to me that no damage had been done to the roof, except the holes made by the falling brick. The end seam of the eve trough was melted loose.

Had Mr. Keefer placed an iron rod under the back part of the bottom elbow, extending it into the ground, the roof would have suffered no damage whatever from the lightning on the roof. As it

was, however, the house was saved from being burned to the ground by the sheet metal roof.

Figure 2 is an illustration of an 80-foot "bank barn" or "over-shoot barn," the kind that was usually built near my former home town some fifty years ago. This section was then quite extensively settled with thrifty Germans, who invariably built a good barn for their cattle first and then when they were able, put up a dwelling house.

This barn was owned by Christian Caldwell and was, or is, still located in Tuscarawas county, adjoining Stark on the west. It is about ten miles west of the Keefer farm. I contracted to cover the roof with sheet metal. This building was struck by lightning some few months after the sheet metal roof was laid. Apparently the lightning struck it about sixty feet back of the eve-trough outlet, because from that location all the way

to the outlet every seam of the eave-trough was melted loose. Eave trough joints were at that time eighteen and twenty inches. There were three pieces to the 20x28-inch sheet. The top ventilator was covered with sheet metal similar to that of the main roof. However, a careful examination of this ventilator failed to reveal where the lightning first struck.

The young lady of the house who happened to be on the side of the barn that was struck said that she had seen the lightning strike and for an instant thereafter it appeared to her as if the entire roof was afire. Then the fire ran off one corner of the building. This was the corner where the downspout conducted the rain off to the ground. There was no rain barrel at the bottom, but instead a conductor to the ground. There was no damage to the roof, except about forty eave-trough joints to resolder,

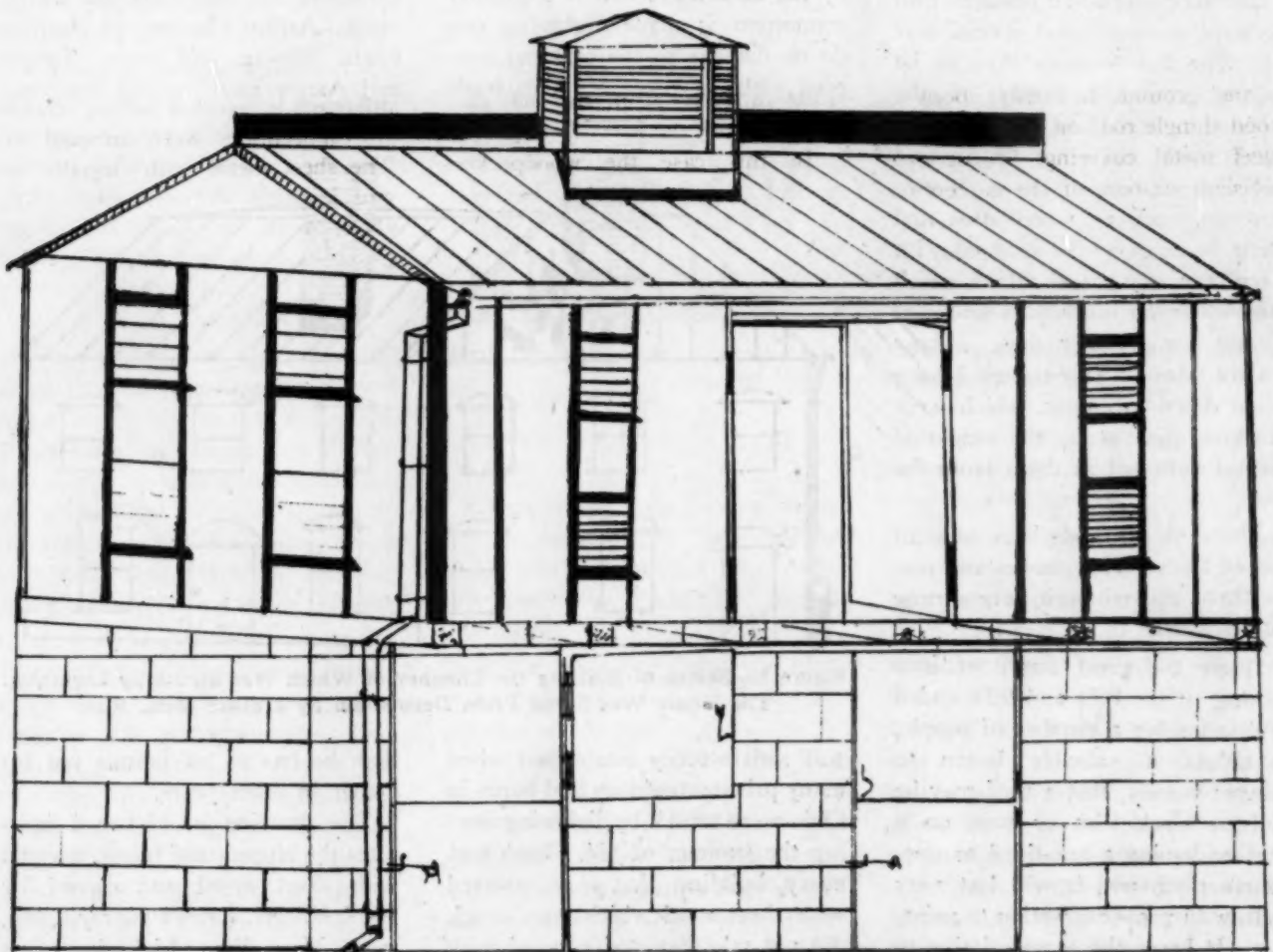


Figure 2.—Caldwell Barn Struck by Lightning, But Doing Little Damage Aside From Melting the Solder Out of a Few Joints

The consensus of opinion at that time was that if the lightning stroke was hot enough to melt the solder out of over half the joints of the eave-trough, the barn would most certainly have been fired and burned

bottom shoes to the ground.

Figure 3 is an illustration of the Baptist church which was located in a grove seven miles north of Mani, Mason county, Illinois. In this case the ending to the story was

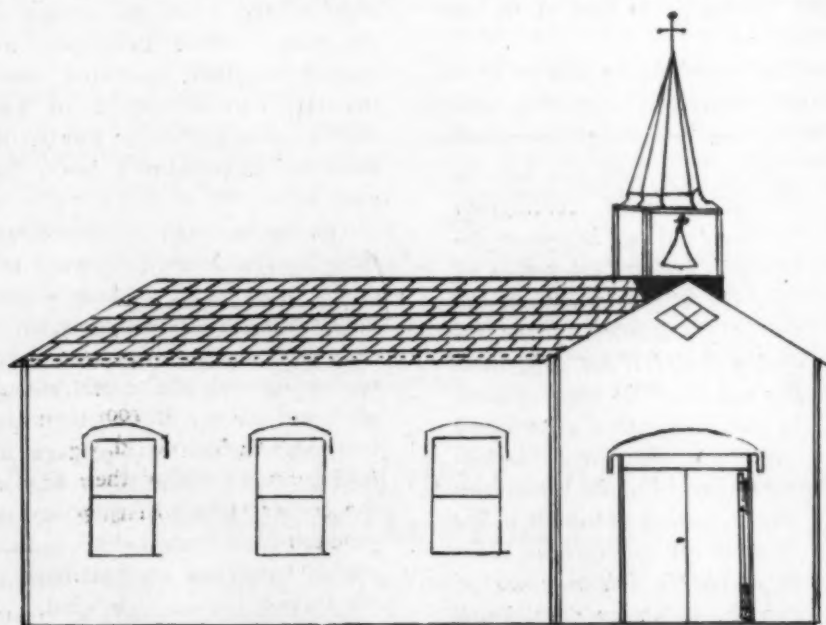


Figure 3.—Sketch of Baptist Church Which Was Burned to Ground Because No Ground Connection Had Been Made for the Electricity to Pass From the Roof Without Doing Harm

to the ground, had there been a wood shingle roof on it instead of a sheet metal covering. Most evidence in support of the contention that sheet metal roofing does protect the building it covers from the danger of being fired by lightning striking it.

In this case the lightning scattered over the sheet metal roof ran down the conductor to a shoe at the bottom and then off into the ground.

The freakish phenomena of a stroke of lightning is often beyond the human understanding. Such was the case of Michael Nowle's barn in Carroll county. It was one of the largest barns in that county. It was 104 feet long, including a 2-foot cornice at each end. The width was well in proportion to the length. This barn had a wood shingled roof. Lightning struck the eave-trough somewhere near the center of the barn, melted considerable solder in the joints toward each end, ran down the conductor pipes and passed off the

quite different from the one narrated above.

In this case the woodpeckers pecked holes in the half-inch boards which covered the steeple,

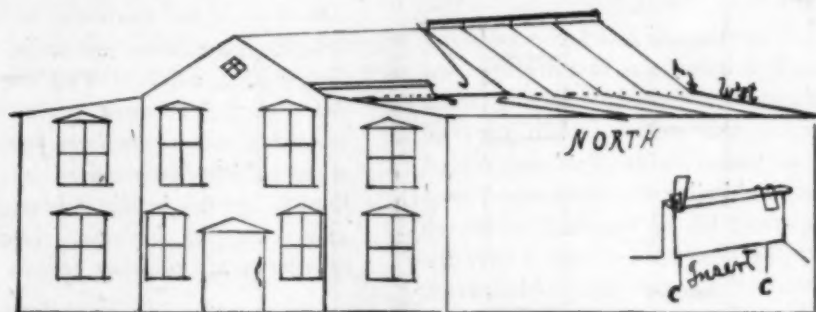


Figure 4.—Flour Mill Having Type of Roof Which Is Liable to Cause Inexperienced Sheet Metal Contractor to Err in Putting Roof on

giving it the appearance of a sieve. The base under it was octagonal. I tacked sheet metal over the hip lines and finished the eight hips with a small ridge roll, which was blind nailed to place. When the ridge roll was painted green to harmonize with the building trimmings and when the panels were painted white, the effect was quite pleasing.

Our work ended in the fall, but our troubles began in April, with the coming of the showers and thunder storms.

The building committee of the church had been warned that should lightning strike the sheet metal covered steeple, with no means provided for leading the charge off to the ground, serious damage was apt to occur. They all promised faithfully to have a rod run from the steeple base to the ground, but never did.

Early in April the steeple was struck by lightning. The charge ran off the base onto an old pine shingle roof, which was immediately ignited, and the church burned to the ground. We know positively that the building committee of the church was at fault, which they admitted without quibble.

A sheet metal roof is a protection to a building. It is more serviceable than lightning rods if there is a ground connection provided.

Fifty years ago sheet metal trade journals were scarce. Manuals were unknown to most of us and schools for apprentices were unheard of. The sheet metal "cub" usually began learning the mysteries of the sheet metal business by working

around the stable, spading the garden or helping the missus. Most of my early mistakes were merely embarrassing to me. Later they were more serious. One especially, caused by inexperience and listening to advice given by older heads not qualified to give it, led me into a grievous error, which should be related to every reader of AMERICAN ARTISAN, as perhaps some

one may profit by it.

Figure 4 illustrates this error. It is a mill having two stories and an attic. The center structure with the front door was the original mill. The whole was covered with a sheet metal roof after the side additions extending west were built. The roof was laid with 1-inch regulation, double seamed standing seam. It was laid over wood shingles over the original and steeper part of the roof. No break was made in the strips of sheet metal from the comb to the eave, continuing as one piece clear through, with nothing more than a snipping of the two flanges at A on each strip, in order to let the seam fit down into the corner and adjust itself to the two pitches, after which the snipped portion was soldered. The first heavy wind that came along began its little game of suction on the northwest corner. We soon saw that vibration would follow and knowing of no other plan to fasten it with more security, we got an awl, drove it into the standing seam and searched around to make sure that it was between the two flanges. Then we drove the awl clear in, in order to determine whether or not a solid surface could be struck to which to nail it.

After the solid surface was found an 8-inch nail was first driven down through a piece of roofing sheet metal 1x2 inches. Then the nail was placed in the hole and driven home, binding the sheet metal roof securely to the sheeting, as shown by the insert, then formed over the head of the nail and folded down along the side of the seam, where it was cemented.

For a building such as the one illustrated by Figure 4 a roof made from good sheet metal roofing materials and properly applied is the best roof ever devised for the money. The flat cross seams should be thoroughly soldered, the sheets joined the 20-inch way with not less than a quarter-inch fold. It should be laid on level sheeting or lath, not on old, uneven shingles. Cleats should be nailed close up to

the high flange every twelve to fifteen inches. These should be double seamed smooth and tight. In the type roof shown in the drawing 4, the strip should not be continuous from the comb to the eave, but should be broken at the corner A.

The lower flatter section of the roof, when laid complete, should

How long have you been in the sheet metal contracting business? What has your experience during that period of time taught you regarding the future possibilities of the industry itself? What opportunities are there, in your opinion, in the sheet metal contracting and warm air furnace installing business for the young man who is casting about for a line of work out of which he hopes to carve his full measure of success, assuming that he is willing to apply himself first to learn the business and then give it all that he has in the way of constructive effort and ability? In what way do you think the organizations such as the Sheet Steel Trade Extension Committee, the Copper and Brass Research Association and the American Zinc Institute are benefiting the sheet metal industry as a whole? You are not expected to answer these questions unless you have had at least thirty-five years of continuous service in the industry as a contractor, including your apprenticeship training period.

come to within five inches of the corner. The upper ends of the standing seams should be malletted down smooth and tight, with a spiral curve down the seam three or four inches. Then the top edge of the strips may be lined and sheared straight across the full length of the roof, and a quarter-inch or three-eighths-inch fold back on itself made, under which nailing should be close and secure.

A 10-inch strip is then cut and

formed to fit into the angle between the two pitches, with the crease coming in the center of the strip lengthwise. A fold is made along its lower edge, back and under, to engage the fold made along the edge of the completed section of the roof. These two folds are hooked together, malletted down smoothly and securely from leakage by sweating solder thoroughly into the seam with a heavy hot iron.

The upper edge of the corner strip is now formed forward and down upon itself, making a fold under which the nailing again is close and secure. The roof strips used in covering the second, steeper pitch are given a fold at their bottom edge, which will engage the fold formed on the upper edge of the corner strip. In this way the junction of the two pitches is thoroughly protected from damage by the suction from a high wind.

A good sheet metal roof can be laid under almost any conditions, but the builder should see to it that the tinner makes it a point to display not his speed, but his skill.

Waterloo, Iowa, Hardware and Sheet Metal Dealers Meet at Russell Lamson Hotel

Waterloo, Iowa, is not without its hardware and sheet metal organization. It has a very live organization known as the Hardware and Sheet Metal Dealers' Association of Waterloo.

A meeting of this association was held July 7th at the Russell-Lamson Hotel with President John G. Wright officiating.

After routine business had been concluded, C. L. Bailey of the Sheet Steel Trade Extension Committee gave a very interesting talk pertaining to the activities of that committee, telling the members that \$200,000 is being spent for advertising, most of which benefits the sheet metal contractors; that the mills are increasing their output 35 to 50 per cent due to this advertising and that it reaches about ten million people.

He also told that they receive many inquiries about who does

work in the sheet metal line and that these inquiries are referred to the sheet metal contractors in their respective localities.

Following Mr. Bailey's talk, Mr. Hansen, of the Wheeling Corrugating Company, gave a talk on "Corrugated Roofing."

Fifty Years a Sheet Metal Contractor Is Record of Winona Heating Company Head

Fifty years in the sheet metal contracting business seems a long time, but the fifty years which Mr. Galeuski, President of the Winona Heating and Ventilating Company, 112 Lafayette Street, Winona, Minnesota, have been full to overflow-

ing with interest for him.

Mr. Galeuski has been with the Winona Heating and Ventilating Company for 25 years. This progressive firm has 15 men working all the year around. It has advanced to the stage where it needs three buildings in which to carry its stock, which consists of warm air furnaces, furnace pipe and fittings, registers, asbestos products, galvanized iron and all kinds of roofing materials, foremost among which is sheet metal.

Those fifty years that Mr. Galeuski has been in the business have taught him many important things about the industry and its bearing on business at large.

No Place for Indolent, Inefficient in Present Day Industry

Men Who Can Deliver the Goods Never Lack Opportunity or Certainty of Success

By GEORGE H. CHARLS, President United Alloy Steel Corp.

IN this day of strenuous competition, when the corporation that would survive and succeed must be one hundred per cent efficient in every department, from the highest to the lowest, there is no place for the inefficient, indolent, and self-satisfied individual.

On the other hand, the opportunities for the efficient, conscientious and ambitious individual are greater than they ever have been before, because the need for men of intelligence, vision and exceptional ability is greater than it ever has been. The demand is always present for men too wise for petty bickering and buck-passing, men who have a true conception of the value of teamwork and cooperation.

The issue must not be confused.

The man who can deliver the goods shall never lack for opportunity or the certainty of success. Only those who are inefficient, who doubt their own ability, and know they are not capable of properly filling a position on a winning team need have any uncertainty as to their future in this corporation.

If, in the course of affairs, some men have been relieved, it must be known that the corporation's action has been for the good of the whole, for the sake of all who are doing a real work to make the corporation a success.

No other policy can successfully serve the best interests of the efficient men in the organization, the customers, and the stockholders. It is a policy which should appeal to and win the approval of all who look to the corporation as a source of opportunity, service or investment.

The corporation presents an opportunity for success, happiness, and safety to any man who has the ability to take advantage of these opportunities, who can demonstrate his worthiness to play the game, cooperate, and be a credit to an organization determined to be second to none.

For such there is unlimited opportunity for success, advancement, and the attainment of their highest ambitions.

Dreis & Krump Develops New Adjustable Back Gauge

The Dreis & Krump Manufacturing Company, 74th and Loomis Streets, Chicago, have developed for use on sheet metal contractors' hand brake an adjustable back gauge.

A description of this new device will prove interesting. The gauge provides adjustment from 0 to 7 inches from the bending edge. The stops are tempered spring steel which flatten out when the brake is clamped. They are bolted to steel cross bar which runs the length of the brake. Holes are placed every six inches in the bar so that stops can be placed to suit any requirement. Bolts which fasten stops to bar furnish the necessary clearance so that the stops lay on the bottom bar of the brake, and the bolt heads ride on plate on bed of brake.

A rod extends backward on each end of cross bar. This rod runs through casting in rear of brake and thumb screw on casting holds gauge tight at any point. The rear castings are fastened to legs of brake by set screws.

Word Premier Now Registered—Also Phrase Healthy Humid Heat

The word Premier is now registered in the United States Patent Office, and is the property of the Premier Warm Air Heater Company, so far as stoves and furnaces are concerned, according to information broadcast by E. C. "Buck" Taylor, Manager of Sales and Advertising of the Premier Warm Air Heater Company, Dowagiac, Michigan. Likewise, the phrase "Healthy Humid Heat" is registered and a part of the Premier trade mark.

In this connection it might also be added that shortly after the middle of July a book entitled "Healthy Humid Heat" will be issued by the Premier Warm Air Heater Company and which will have considerable interest for warm air furnace dealers. It is thought that this book will mark an epoch in warm air furnace advertising.

Patterns for Oblong Connection to a Hood Are Shown Constructed in Article Below

Case Shown Deals With Oblong to Round Transition Fitting Joined to Inclined Hood

Written Especially for AMERICAN ARTISAN by O. W. KOTHE, Principal, St. Louis Technical Institute, St. Louis, Missouri

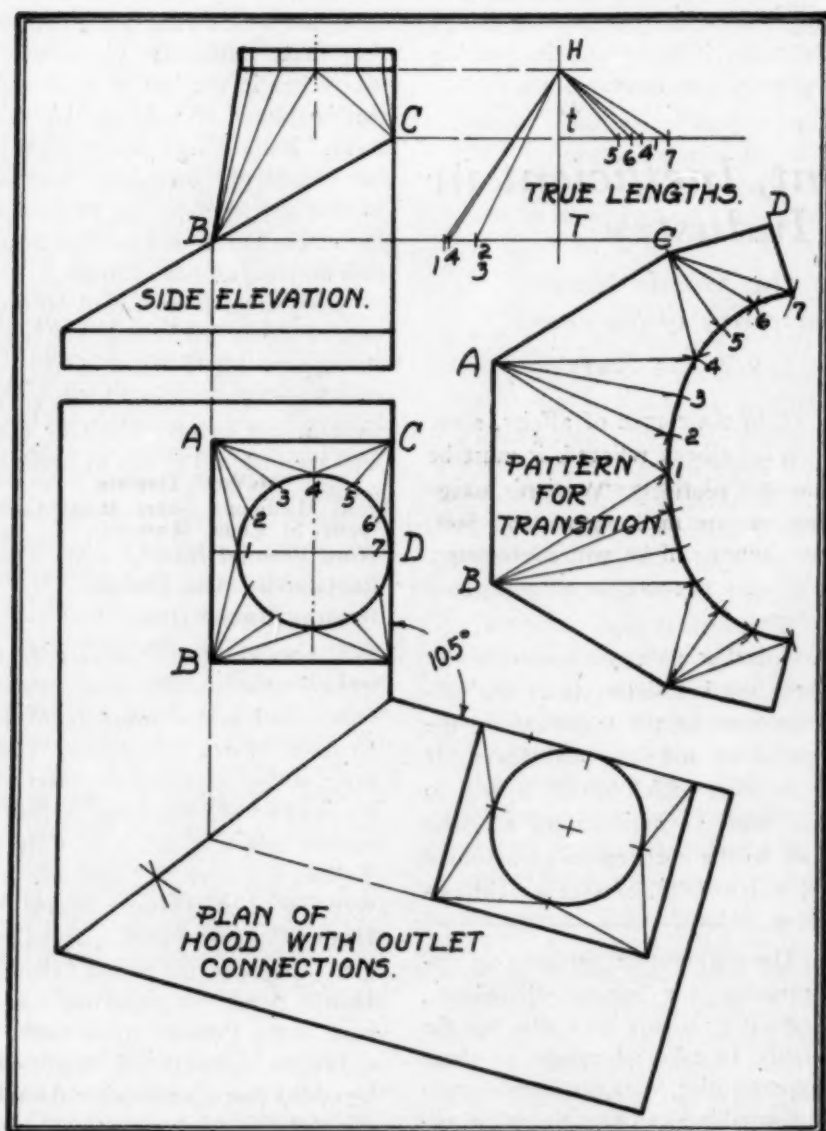
IN the accompanying drawing we show a hood with a sloping side, on which a transition is attached for the removing of gases, fumes, smoke, odors, etc. The transition in this case happens to be straight

is a variable conditioned upon the circumstances attending each different job. Otherwise the treatment is much the same as any square to round, only here we have two different altitudes with a base

as A-B, with the circle placed where shown. Divide this circle into any number of equal parts and draw lines to the corners as shown. As these lines represent the base lines of triangles, so the elevation height, as H-T and H-t, represent the altitudes of the transition. Pick these lines from the plan, as A-1-2-3-4 and set them as T-1-2-3-4, and draw lines to H. In the same way we pick lines T-4-5-6-7 and set them, as t-4-5-6-7, and draw lines H. This gives us the true lengths for developing the corner.

To start the pattern draw any line, as A-B, to correspond with the length, as A-B of plan. Pick true length 1-H and use A-B in pattern as center, striking and crossing arcs in point 1. With the dividers pick one of the spaces in the plan, as 1-2, and using point 1 in pattern as center, strike arcs, as at 2. Now pick true length H-2 and A and B as center cross arcs in point 2. Repeat this by describing arc 3 from new center as 2 and then cross this with line H-3. Repeat this with line A-4 and then pick the slant line of side elevation, as B-C, and set in pattern, as A-C. Now pick the true length H-4, and using new point 4 in pattern as center, cross arcs in point C. Continue in this way until points 7-D are established and draw lines through all points where arcs cross and the pattern is finished. Laps for seaming must be allowed extra.

If you are having difficulty in laying out any particular job, send the details to AMERICAN ARTISAN. Our expert on this work, Mr. O. W. Kothe, will work them out for you. Your answer will be returned to you by mail if you so specify.



Pattern for Hood Connection

on the back side, as shown at B, so that the pipe will run straight with the wall and which will not require an additional angle. The slope of hood as C-B of elevation,

to consider.

First, draw the elevation line, as B-C, and drop lines into the plan, thus giving the outline as per measurements for the length and width,

Better Business Bureau Helping Retailer Wipe Out Blue Sky Promotions

"The retailer acts as the purchasing agent for the consumer," declared Edward L. Greene, Managing Director of the National Better Business Bureau, in a talk to the Associated Retail Advertisers at Philadelphia on June 22. "He goes into the market and buys merchandise that he believes desirable and serviceable for consumer use. He depends upon his ability to do this for his continued success."

The retailer is frequently handicapped, pointed out Mr. Greene, by unfair advertising or selling methods on the part of producers or competitors. Deception, or inaccuracy in the naming, labeling, advertising and marketing of merchandise, although practices in which the retailer may himself take no active part, create a barrier between the retailer and some of those consumers whom he is in business to serve. Not only blue sky promotions, but such parasites on business as fake directory schemes, bogus help wanted, business opportunities, mail order and home work schemes, waste part of the wealth of the community and thus react directly upon its spending power, cutting down by that much the degree to which the retailer is enabled to serve his community public.

The Better Business Bureau movement, asserted Mr. Greene, is organized to work with the retailer who sets an intelligent value on public good-will. While local bureaus deal directly with the problems of retail advertising and selling in more than forty cities, the National Better Business Bureau, working with manufacturing, distributing and retail groups, works out standards of business practice which insure fair play to each element of business from maker to consumer. The application of these standards is made practical by the co-operation of the entire Better Business Bureau movement with the makers, sellers and users of a commodity. The same public whose savings are protected by over 10,000 financial

inquiries a month addressed to Better Business Bureaus, concluded Mr. Greene, is acquiring greater confidence in the representations of legitimate business as a result of their merchandise work. These organizations are to be congratulated.

Chicago Police Court Cornice Falling Story Arouses Much Interest

Sheet metal contractors all over the country are industriously forcing sheet metal to the attention of architects and the public in general. In the June 19 issue of AMERICAN ARTISAN there appeared a story concerning the stone cornice which fell from the Clark Street Police Court, Chicago. This story aroused a great deal of interest and many requests for reprints of the story were received, one request in particular coming from P. F. Brandstedt, Washington, D. C.

Upon receipt of the reprints sent to him, Mr. Brandstedt wrote as follows:

TO AMERICAN ARTISAN:

"We want to thank you for the June 19 reprints. We are using them in our mail matter and feel their effect will be noticed because of the graphic story told.

"Would suggest that you reprint every one of these accident stories. Their happening will be more frequent as time goes on, and each one is a selling point for a better material and application."

L. B. Young Retires From Michigan Stove Company

L. B. Young, formerly general manager of the Michigan Stove Company, Detroit, who continued in the Detroit-Michigan Stove Co. after the recent consolidation of those interests, has retired. Mr. Young was connected with the Michigan Stove Company for many years, having advanced from office boy to general manager, which position he held from 1914 on. Mr. Young's many friends in the trade will be sorry to learn that he is leaving.



"Richmond" Furnace.

From Wendel Furnace and Sheet Metal Works, 246 First Street, Hinsdale, Illinois.

Can you tell us who makes the "Richmond" furnace?

Ans.—Richmond Stove Company, Richmond, Virginia.

Address of St. Louis Technical Institute.

From P. Hengsperger, 924 Center Street, Chicago.

Please tell me where the St. Louis Sheet Metal School is located.

Ans.—This is known as the St. Louis Technical Institute, and is located at 4543 Clayton Avenue, St. Louis, Missouri.

"Kantbreak" Ladders

From Wendel Furnace and Sheet Metal Works, 246 First Street, Hinsdale, Illinois.

We should like to know who makes the "Kantbreak" ladders.

Ans.—Kantbreak Ladders, Incorporated, 9th and Monroe Streets, St. Louis, Missouri.

"McVoy" Tinsplate.

From Hammond Sheet Metal Company, St. Louis, Missouri.

Can you tell us who makes the "McVoy"terne roofing plates?

Ans.—McVoy Sheet and Tin Plate Company, 344 West Austin Avenue, Chicago, Illinois.

Ashpit Doors.

From Hoffmann's Tin Shop, New Buffalo, Michigan.

We should like to know who makes large ashpit doors.

Ans.—Majestic Company, Huntington, Indiana; Klauer Manufacturing Company, Dubuque, Iowa; Rock Island Manufacturing Company, Rock Island, Illinois, and Adams Company, Dubuque, Iowa.

"Jiffy" Hole Cutter.

From Lentz Hardware Company, 224 West Yakima Avenue, Yakima, Washington.

Please inform us who makes circular cutters for sheet metal which cuts holes up to four inches in diameter?

Ans.—This is known as the "Jiffy" hole cutter and is made by Paul W. Koch Company, 19 South Wells Street, Chicago, Illinois.

Random Notes and Sketches

By Sidney Arnold

"The essence of humor is sensibility; warm, tender fellow-feeling with all forms of existence."—Carlyle.

In the sheet metal and warm air heating industries there is hardly need for the admonition to the salesman that he should not get so enthusiastic about his product that he forgets to ask his customers to buy. Never-the-less here's the warning.

The hardware salesman was selling cutting machines and his first canvass was a Dutchman. He started right off with a demonstration. Then he turned to the Dutchman and asked: "What do you think of 'er? Some machine, eh?"

The Dutchman, eyes shining and his face wreathed in smiles, slapped his hands approvingly and said: "Py gollied! Dot's fine! Dot's a great t'ing."

"Don't you think that's a time-saver—a real investment?"

"Sure! Dot's de stuff, all right."

"You think it's a good thing for you?"

"Sure! Dot's de perries."

"You know you need it, don't you?"

"Sure! I should say so."

"Well, why don't you buy it?"

"Vell, vy don'd you ask me?"

* * *

"How dared you kiss me like that?" screamed the pretty young woman. "You—an absolute stranger—right on the public street—before everybody?"

"I don't know," apologized the movie actor. "Some fool yelled 'camera'!"

* * *

Once upon a time four jovial golfers in the persons of Art Lamneck, Jack Stowell, R. W. Blanchard and Ros Strong were resting at the seventh green, which lay behind a little hill, when a battered white ball came rolling over the rise and wobbled to the exact center of a particularly soft, sandy and soul-searching bunker, some thirty yards away. The author of the unfortunate shot, George Thesmacher, was not in view.

"Let's give him a thrill," suggested one of the jovial quartet. "We'll lift his ball and make him think he did the hole in one. Then what a laugh we'll have when we hear him spreading the news all over the club."

The suggestion was duly carried out and the ball neatly deposited in the hole just before a weary George wandered over the crest of the hill, casting a roving but hopeful eye over the scenery. The foursome greeted him with enthusiasm and wrung his hands warmly.

"Here's where it rolled," cried Jack tracing a tortuous course across the green with his mashie. "Just the right angle, just the right force—a perfect shot—plop! into the hole."

The weary George pulled a much-thumbed score card from his pocket.

"Good!" he murmured. "That gives me a nine."

* * *

Mrs. Junia Roberts, manager of the Roberts Sheet Metal Shop, Gary, Indiana, is one of the very few feminine sheet metal contractors in the country today. In spite of the fact that she is a first-class sheet metal contractor and warm air furnace installer (I say in spite of that fact), she objects very strenuously to the use by the workmen of anything but the best parlor language.

Quite recently two telephone men were "shooting" some trouble on a pole in front of Mrs. Robert's home. I don't know what the men said, but Mrs. Roberts protested so vigorously about it to the telephone company that an investigation was instituted. The men were called upon the "carpet."

The foreman was asked to report. This he did in the following way:

"Me and Bill Fairweather were on this job. I was up the telegraph pole, and accidentally let the hot

lead fall on Bill. It went down his neck. Then he said: 'You really must be more careful, Harry.'"

* * *

My friend Travers Daniel, Jr., Michigan representative for the Gilt Edge furnace, came in to see me the day after the Elks' convention closed. I had a sort of a suspicion that Travers would drop in after the festivities were over. Of course, I didn't expect to see him any sooner than that. He was all dogged out in a purple tie with white spots. I don't know how the white spots got on his tie, but perhaps they were the result of the moonshine which he spilled in refusing it from his friends.

* * *

The other day Dave Farquhar hied himself off for a little vacation. He dashed to the railway station a minute before the train pulled out.

"Quick, give me a round-trip ticket," he gasped.

"Where to?" the ticket agent asked.

"Back here, you dumbbell, Wher'd you think," was the retort.

* * *

Out Fishin'

A feller isn't thinkin' mean

Out fishin';

His thoughts are mostly good and clean

Out fishin'.

He does not knock his fellow-men,
Or harbor any grudges then;

A feller's at his finest when

Out fishin'.

A feller's glad to be a friend,

Out fishin';

A helpin' hand he'll always lend

Out fishin'.

The brotherhood of rod and line

An' sky and stream is always fine;

Men come real close to God's design

Out fishin'.

A feller isn't plotting schemes,

Out fishin'.

He's only busy with his dreams

Out fishin'.

His livery is a coat of tan,

His creed—to do the best he can;

A feller's always mostly man,

Out fishin'.

The Editor's Page

Perfecting Tools to Suit Your Own Needs

WARM air furnace installers, if they are to make money, must employ some method of accurately figuring material, labor costs, profit and overhead charges. Without such a method their bids are nothing but the result of guess work, and the art of guessing correctly has not yet been developed into a science.

On another page in this issue of *AMERICAN ARTISAN* there is described a system of calculating accurately the four factors which enter into each and every bid—materials, labor, overhead and profit.

The system outlined was worked out by the G. & S. Stove and Furnace Company and has been used by them with satisfactory results for some time.

The principle of the system is very simple. It is known that a definite relation exists between each piece of material that goes into the job, its cost, the labor item involved necessary to instal it, and the overhead on the entire business which each item must bear.

Therefore if we can refine our costs to a point where we know the amount of labor necessary to instal each item on the job; if we know what per cent of overhead each item is to bear; if we know what our material costs are and have pre-determined the amount of profit to be made on each job, our estimate then becomes merely a matter of adding the total number of individual items.

That is precisely what the G. & S. Stove and Furnace Company have done in designing their Standard Code Cost Sheet. They were able to arrive at the individual figures by going back into their records and using the statistics which they found there. From these figures a group of averages were struck off on all of the items. Having once found the average, it was a simple matter to pro-rate the overhead, profit and the cost of the material to each item.

A great deal can be done by the sheet metal contractor or warm air furnace installer in the way of creating the tools he finds necessary in his business if these men will only put their minds to the job.

Great manufacturing organizations are constantly finding necessary new tools to the production of an invention they have developed. Where are they to get these tools? Chances are they are not to be had on the market, so they must develop them themselves in their own machine shop. The same is true with the business man. He has needs that are perhaps peculiar to his business. They find nothing on the market which is exactly what they want, so they do the next best thing; they develop the tool or system to suit their own needs.

In the case of the G. & S. Stove and Furnace Company, they found that unless they could insure themselves of a certain definite profit on each and every job they undertook to put in, they would not consider it

interesting enough for them to go out after the work. Immediately there was a need developed for an accurate system of figuring costs. The Standard Code Cost Sheet is the result.

Perhaps some time in the future conditions will develop which will make it necessary for them to change or discard this system altogether for another suited to the new state of things, but this does not worry them.

The idea back of it all is, first determine what is wanted and then set about getting it. If what you want is not on the market, don't let that discourage you.

Putting Teeth in Kentucky's Mechanic's Lien Law

THE Kentucky State Legislature has recently passed a law that from all external appearances is provided with a set of sharp teeth which the sub-contractor can use to bite out his redress in case he is left holding the sack after his work upon a building is completed.

The law provides that the owner of property who shall contract for labor on that property is directly responsible for the payment of the mechanic or sub-contractor. It further prohibits the owner from failing to apply the proceeds of the sale of a property or a loan thereon to the payment of the amounts owing for labor or material used in the erection, repair or improvement of any structure thereon.

Interpreted, this law provides that if an owner of a building does contract for work on that building which, in the natural course of events would be allotted to a sub-contractor or specialized contractor, and should sell or make a loan on that property before the expiration of the time provided for the filing of a mechanic's lien, he is compelled to use the proceeds of such sale to pay for the labor and material for which he has contracted.

Such a law cannot fail to devolve to the benefit of the sheet metal contractors of Kentucky. Too often the contractor has been successful in getting a job and faithfully completing the work only to find that he has a long wait ahead for his money involving legal complications. Nothing is more discouraging to a contractor or workman of any kind than not to be paid promptly when his work is completed. It throws his whole financial schedule off and may put him in an embarrassing position with regard to his own creditors.

Is there any logical reason why an owner of a building should be permitted to sell out before the contractors who have served him faithfully and according to his own desires have been paid? No, there is not!

The Kentucky law is expressly designed to prohibit such occurrences. Contractors in other states have no doubt been up against that very condition, and it is to their individual interest to take measures to get legislation similar to that of Kentucky on the statute books if they have not already done so.

Standard Code Cost Sheet Evolved by Progressive Furnace Installer

Each Item of Material Bears Its Proportionate Share of Overhead, Labor and Profit Charge

By GEORGE J. DUERR

THE progressive warm air furnace installer is constantly casting about for methods of record-keeping that will assist in determining not alone the cost of materials, labor and incidentals, but that will give him the actual figure he must get for his work if he is to make a certain definite profit. As a matter of fact to so figure each job that the amount of profit to be made is clearly shown the contractor before the bid is submitted is the only logical method of conducting a business. Of course such methods are not possible of employment by the price cutting artist. There is no way that he can figure to absolutely assure himself of a profit.

The G. & S. Stove and Furnace Company, Chicago, has worked out what they term a Standard Code Cost Sheet. A reproduction of this cost sheet is shown on the opposite page. At the outset it is explained to the reader that the figures used by the company in determining the estimated cost have been purposely omitted from the sheet. These figures would not apply to any other business and there would be, therefore, no point in showing them here. Each installer will of necessity be obliged to compute his own costs and insert them on the sheet.

Now for the explanation of how the G. & S. Stove and Furnace Company arrives at its estimated cost and profit of a warm air furnace installation. In the first place the material requirements of the installation are listed individually upon the sheet in their proper places. Where these proper places are can be seen by a glance at the reproduced sheet. Under each of these items there appears a figure (omitted from reproduced cost sheet) which represents and combines the cost of that par-

ticular item, the cost of the labor required to install it, and the ratio of profit and overhead expense which it is to bear to the whole job.

When all of the requirements are listed, the only further operation necessary to determine the total estimated bid on the job is the adding together of all of the individual items. This is done at the lower right-hand corner of the same cost sheet. So that when the operation

In this article the author has made an effort to present a method of computing estimates on warm air furnace installations that is as nearly accurate as it is possible to get it. The Standard Code Cost Sheet has been in use by the G. & S. Stove and Furnace Company for some time—long enough to prove its ability to produce the desired result. Many of the furnace installers on the North and West sides of Chicago are using this cost sheet with good results. Any furnace installer who desires further information on this sheet can obtain such information by writing the editor of AMERICAN ARTISAN.

is completed the contractor has before him an accurate figure of what he must charge in order to make the profit he desires.

The figures used by the G. & S. Stove and Furnace Company were arrived at by taking the averages of a large number of jobs put in by the company over a period of time. It was found that the figure was approximately 10 per cent too high. So that on all new work 10 per cent is subtracted from the total obtained by using the cost sheet.

On all replacement work, however, the figure obtained is allowed to stand, as it is thought that unforeseen contingencies are almost always encountered, and the extra 10 per cent gives the contractor an added protection.

Roughly speaking, the figures used by the company, but which are not shown on the sheet for obvious reasons, are as follows: Materials, 100 per cent; labor, 20 per cent; overhead, 25 per cent; profit, 20 per cent, and so on up to a total of 181 per cent.

Each and every job which this company takes on must show a total of 181 per cent in all or the job is not taken on. The members of the firm have decided that anything less than that percentage is not profitable enough for them to spend their time on.

The main advantage in using a cost sheet of this type is that nothing is overlooked, all charges are made as they should be and there is no guess work. In spite of the fact that firms do take work at too low a cost, no one can really afford to take on a job that is not going to net him a definite profit. Estimating by guess too often works an injustice on the installer and his customer. So why not be scientific about it?

American Blower Company, Detroit, to Make 1-Story Addition

The American Blower Company, 6004 Russell Street, Detroit, Michigan, will build a 1-story addition to its fan shop 142x164 feet, at Russell Street and Harper Avenue. Smith, Hinchman & Grylla, Marquette building, are architects. James Inglis is President of the company.

Standard Code Cost Sheet

G & S H HEALTHFUL UMIDIFIED EATING System

File No.

Date

Contract No.

Salesman

For

At

Furnace@

Style Bldg. Built of

Casing@

Figured By Checked By

Total

FITTINGS FOR WARM AIR

	8 in.	9 in.	10 in.	12 in.	14 in.	Total
W. A. Pipe....	Ft....	Ft....	Ft....	Ft....	Ft....	Ft....
W. A. Elbows..	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
W. A. Angles..	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Collars	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Dampers	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Head Single ..	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Head Double..	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Str. Boot	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Angle Boot ..	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Boot Angles ..	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Beam Boxes ..	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Floor Boxes ..	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Spec. Fittings						

SECOND FLOOR

Wall Stack	3½x10.....	ft. @.....
Wall Stack	3½x12.....	ft. @.....
Elbows	3½x10.....	Ea. 3½x12.....
Angles	3½x10.....	Ea. 3½x12.....
Head Single	8 x10.....	Ea. 9 x12.....
Head Double ...	8 x10.....	Ea. 9 x12.....

Total Warm Air Fittings.....

WARM AIR REGISTERS

Bl. Japan ..	8x10..	9x12..	10x12..	11x13..	12x14.....
L. A. Brass..	8x10..	9x12..	10x12..	11x13..	12x14.....
Ox. Copper..	8x10..	9x12..	10x12..	11x13..	12x14.....
B. J.Fl. Reg.	8x10..	9x12..	10x12..	12x14..	14x16.....
Ox. Fl. Reg..	8x10..	9x12..	10x12..	12x14..	14x16.....
L.A.B.Fl. R.	8x10..	9x12..	10x12..	12x14..	14x16.....

Total

Cement, Sand

Lumber

Carpenter Work

Stone Cutting

Wire NailsLbs. @.....

Dry PasteLbs. @.....

Asbestos Paper.....Lbs. @.....

Air Cell Paper.....Lbs. @.....

Hot Water Bulb

Total Incidentals

SMOKE PIPE FITTINGS

	8 in.	9 in.	10 in.	Total
Galv. Pipe	Ft....	Ft....	Ft....	Ft....
Elbows	Ea....	Ea....	Ea....	Ea....
Angles	Ea....	Ea....	Ea....	Ea....
Thimbles	Ea....	Ea....	Ea....	Ea....
Draw Bands	Ea....	Ea....	Ea....	Ea....
Cast Damper	Ea....	Ea....	Ea....	Ea....
T Joints	Ea....	Ea....	Ea....	Ea....
Total				

COLD AIR FITTINGS

	16 in.	18 in.	20 in.	22 in.	24 in.	26 in.
Pipe	Ft....	Ft....	Ft....	Ft....	Ft....	Ft....
45 Angle	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
60 Angle	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Elbows	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Collars	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Dr. Band	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
Shoes	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
M. Face	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
W. Face	Ea....	Ea....	Ea....	Ea....	Ea....	Ea....
G. I. Pan	Ft....	Ft....	Ft....	Ft....	Ft....	Ft....
Lbs. Galv. Iron @.....						
Total						

DOUBLE FITTINGS

Wall Stack	3½x10.....	Ft. @.....
Wall Stack	3½x12.....	Ft. @.....
Elbows	3½x10.....	Ea. 3½x12.....
Angles	3½x10.....	Ea. 3½x12.....
Heads, Single ...	8 x10.....	Ea. 9 x12.....
Heads, Double ..	8 x10.....	Ea. 9 x12.....
Total		

Automatic Humidifier, @.....

Total Warm Air Fitting.....

Total Smoke Pipe Fitting.....

Total Cold Air Fittings.....

Total Double Fitting.....

Total Warm Air Registers.....

Total Incidentals

Total Furnace and Casing.....

Freight and Drayage.....

Total Estimated Cost.....

Circular Chimney Flue Proved More Efficient Than Square or Oblong

Swirling Upward Movement of Hot Gases Keeps Round Flue Free from Soot Deposits

By M. B. HOFFMAN, Holland Chimney Company

"OF THE mistakes commonly made in home building, none is more frequent than faulty design and construction of chimneys." So says the U. S. Government in its Bulletin No. 1230.

A nation-wide questionnaire to furnace men would bear witness to the mighty truth of this Government statement. Regardless, good or bad, the chimney is ultimately the furnace man's problem. A recent survey by one of the large furnace companies disclosed the fact that upwards of 90 per cent of their trouble calls had their origin in leaky and defective flues.

The faulty chimney of the past has not been a respecter of persons or firms. It has lashed out to tear down the efficiency of heating plants regardless of the name they bore. Speaking strictly from a furnace man's standpoint, a trouble job having its origin in the chimney is far more serious than an actual furnace trouble call. The psychological slap-back from the home owner is one of "alibi." It is very rare to find an owner convinced that the "trouble" was not the fault of the furnace.

Fire Hazard in Past Type Construction

Millions of dollars in property are annually wiped out because of this menace. Back drafts in the square type corners (which are nothing more than dead air pockets) cause congealing of gasses, forming soot. This soot, ignited by a spark from the furnace, often causes dangerous chimney fires.

Cracking of Flue Lining Presents Added Danger

Another feature that has caused no end of grief has been that of the cracked flue lining. The expansion and contraction that is bound to follow in the wake of heavy firing

eventually cracks down the flue lining, forming openings through which sparks find their way into the attic of the house. The cracked lining also detracts materially from the efficiency of operation of the furnace. Seepage of flue gasses

In this article the author has pointed out the main differences between the old type square or oblong chimney flue and the newly developed round flue. He has shown how the old square flue caused back down drafts and how these are prevented with the round flue. He illustrates why greater efficiency and consequent economy are obtained where the round flue is used. And the product he describes will, of course, be of great interest to warm air furnace installers.

through these cracks cuts down draft efficiency as well as presenting added fire hazard.

Coal dealers, too, are not immune from troubles arising from the faulty chimney. Coal complaints in the majority of cases are not coal complaints at all, but rather the lack of proper draft. Here again the back drafts in square corners and cracked lining take their toll of grief and inconvenience.

American Public's Demands

But the American building public have demanded an improvement in chimney construction—not without justifiable cause. They have suffered immeasurable loss in life and property all because of faulty flue design.

This public complaint and demand has already been heard and heeded. Backed by leading engineers and

architects, the Holland Chimney Company, Holland, Michigan, has developed what is termed the New Round Flue Safety Chimney.

The New Round Flue Safety Chimney

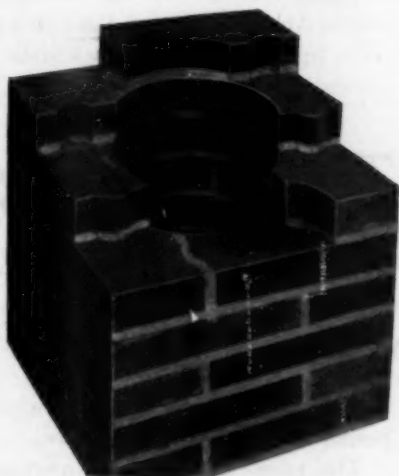
This new round flue chimney is constructed with four designed block, each geometrically correct and interchangeable. (The blocks are manufactured out of clay and shale products, baked at 1800 degrees for a period of two weeks.) The chimney brick is manufactured to give three sizes of flue, namely, 8 inches, 9 inches and 10 inches. In the case of any of these sizes, one joint only to a side, and that interlocked in 5½ inches of mortar. It is impossible for mortar to drop out of the interlocked joints through disintegration. This locked mortar joint is safe, prevents sparks from escaping and thus eliminates the fire hazard.

The design of the brick, as the illustration shows, makes possible a square outside and at the same time a round, smooth interior surface. This smooth, round interior surface produces the exact opposite of the old type square cornered flue, with its dead air pockets in each corner.

The most important function of the properly designed chimney is to produce ample as well as steady draft. The next important function of the properly designed chimney is to eliminate soot deposit. Square type construction increases it, while in round type construction every square inch of interior surface is being constantly wiped clean of soot deposit by the friction of whirling, ascending gasses. Soot cannot collect in round flues, and where you have no soot collection you have no retarded drafts and no cause for chimney fire.

Mammoth industrial plants are

paying hundreds of thousands of dollars to heating engineers to solve their power problems. In every case it is the round flue that is pulling the wheels of modern industry. In other words, where efficiency is



Showing Chimney Under Process of Construction

of paramount importance in the mammoth power plants, there the round flue is found. The application of this admitted industrial advantage is now about to be applied to the "power plant" of the American home.

Under actual test at one of the largest furnace experimental plants the round flue, unlined but interlocked chimney, produced upwards of 30 per cent additional draft over the square lined type of equal flue area. Another item of interest has been the proven economy of fuel that has resulted from the use of this type chimney.

Economy Is Added Feature

Several items enter into the subject of fuel economy. Of first importance is the proper and steady distribution of oxygen over the fire bed, in order to obtain the maximum in combustion or fuel consumption. The next item of vital importance is that of sensitive reaction to damper regulation. It has been conclusively proven that the heater responds more readily to drafts and combustion is slowed up more quickly when the heater is attached to the round flue, resulting in an approximate 12½ per cent fuel saving.

As previously stated, each brick of the round flue is interchangeable and geometrically correct. Squaring the outside automatically gives the perfect circle on the inside and vice versa. One joint to a side and each joint bonded and broken both on interior and exterior walls.

Merit Recognized Nationally

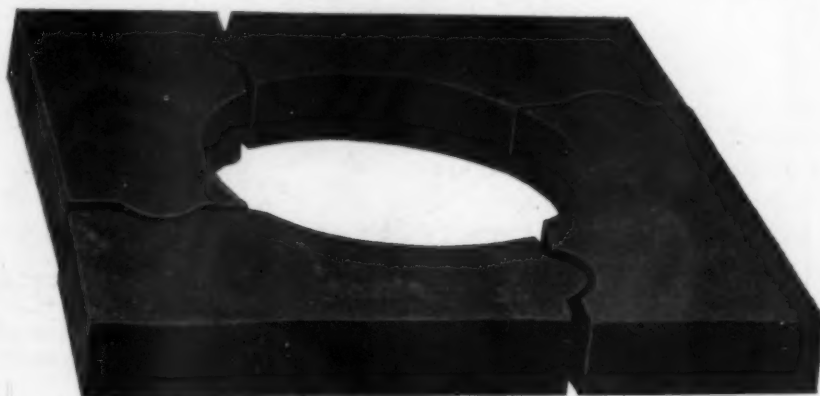
The story of the general acceptance is typical and worthy of the product. In every large center, as well as in practically every other point of population upwards of 4,000—in the absence of a more deserving product—codes required the addition of tile flue lining in chimney construction. Prior to the sale of these brick these codes had to be amended and in other cases permission had to be obtained from city building commissions. Without exception the codes of the Mid-west have been modified not only to permit, but to foster the development of this new era in chimney construction. In addition to the scores

efficiency, safety and fuel economy.

Distribution is also simple. The chimney brick are placed in the hands of reputable brick dealers in various cities and sold as any other brick commodity. The cost of the completed chimney in the majority of cases being no higher than ordinary common brick and lining. The item of cost comparison is, of course, regulated entirely by retail prices of common brick and flue lining in the point under consideration.

Furnace Men Coöperate

In points such as Chicago, Cleveland, Ohio, Columbus, Ohio, Toledo, Ohio, Indianapolis, Indiana, furnace men are actively backing the building supply dealers in the promotion of the new idea. In a good many cases furnace men's luncheons are held where all petty sales competition is set aside and the one common ground problem—the chimney—is discussed. Brick dealer meets furnace man and active co-



Illustrating Four Interlocking and Interchangeable Brick Forming Complete Course

of smaller points, codes were amended and hearty endorsement received in such points as Chicago, Springfield, Rockford, Indianapolis, Fort Wayne, Terre Haute, Toledo, Cleveland, Columbus, Cincinnati, Detroit and others.

In addition to original factory tests, exhaustive experiments were made at the Purdue University, Lafayette, Indiana. These experiments covered not days but were extended over a period of months. Interesting and instructive data was compiled, proving beyond question the superiority of the round flue in

operation with the contractor follows.

The New Round Flue Safety Chimney Company has offices at Holland, Michigan, and are incorporated under the name, Holland Chimney Company. Mr. James DePree is general manager and treasurer of the company.

Model of Research Residence Ideal for Demonstrating Purposes

The miniature replica of the Research Residence, which has been under construction in the Cabinet

Shop at the University of Illinois, is now completed and will be ready for exhibition in the very near future.

The model is 8 feet long, 5 feet wide and 5 feet high. It is complete in every detail and is so sectioned that the proper installation of a recirculating warm air system is easily seen, making it ideal for demon-

strating purposes.

The purpose of constructing this model of Research Residence was to give dealer groups in all parts of the country an opportunity to show their public what has been done in the way of perfecting the warm air heating plant. You can see the house, you can see the heating plant, you can see the leaders and wall

stacks, you can see the registers.

Arrangements for securing the model for demonstrating purposes by any warm air furnace dealer or group of dealers in a given city can be made by writing to the Bureau of Public Relations of the National Warm Air Heating and Ventilating Association, 52 West Gay Street, Columbus, Ohio.

Would You Have Arranged This Heating Job as It Is Shown?

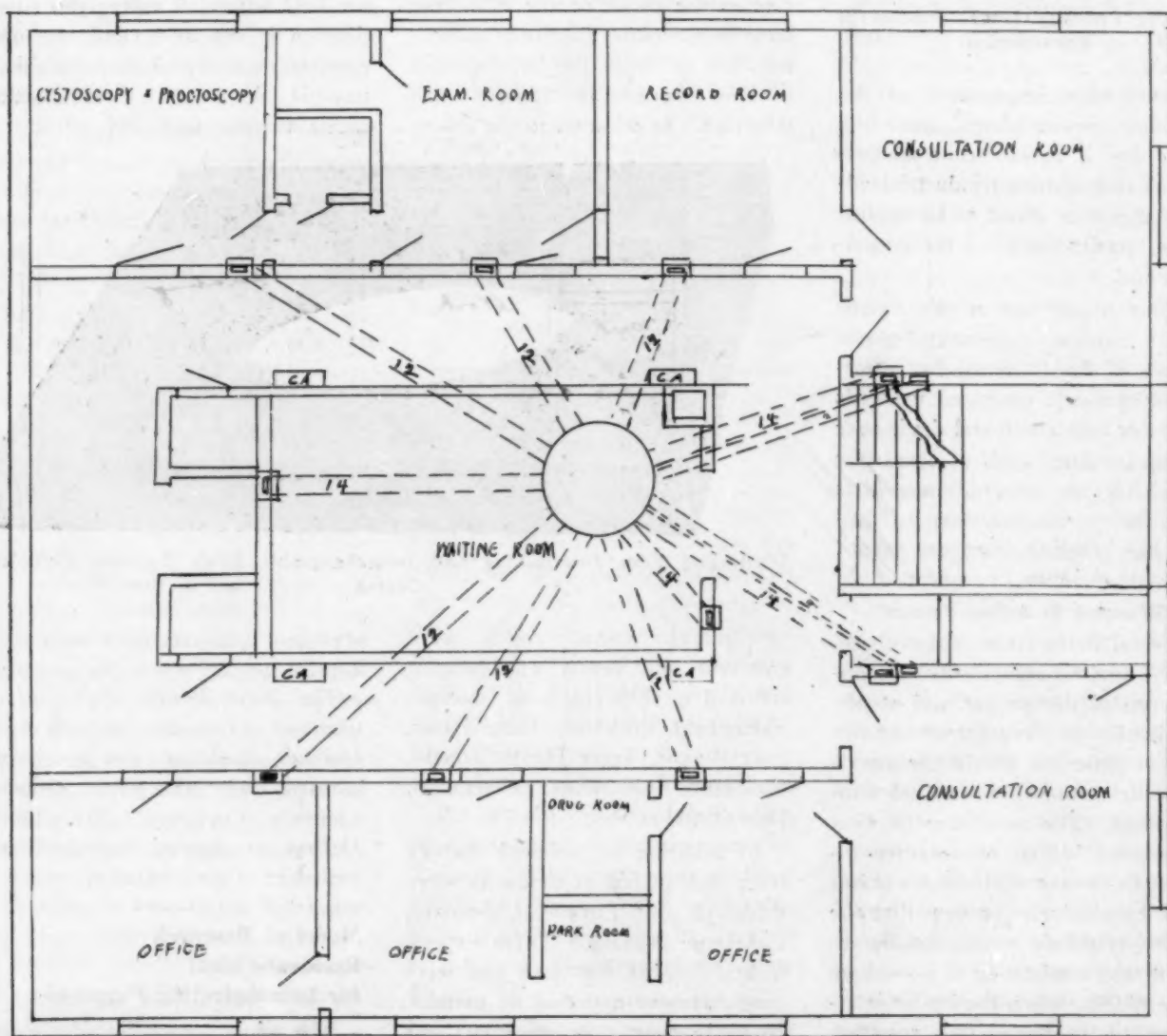
What Is Your Opinion Regarding the Location of the Cold Air Ducts?

CONSTRUCTIVE criticism and debate are the foremost agencies employed to deduce proper

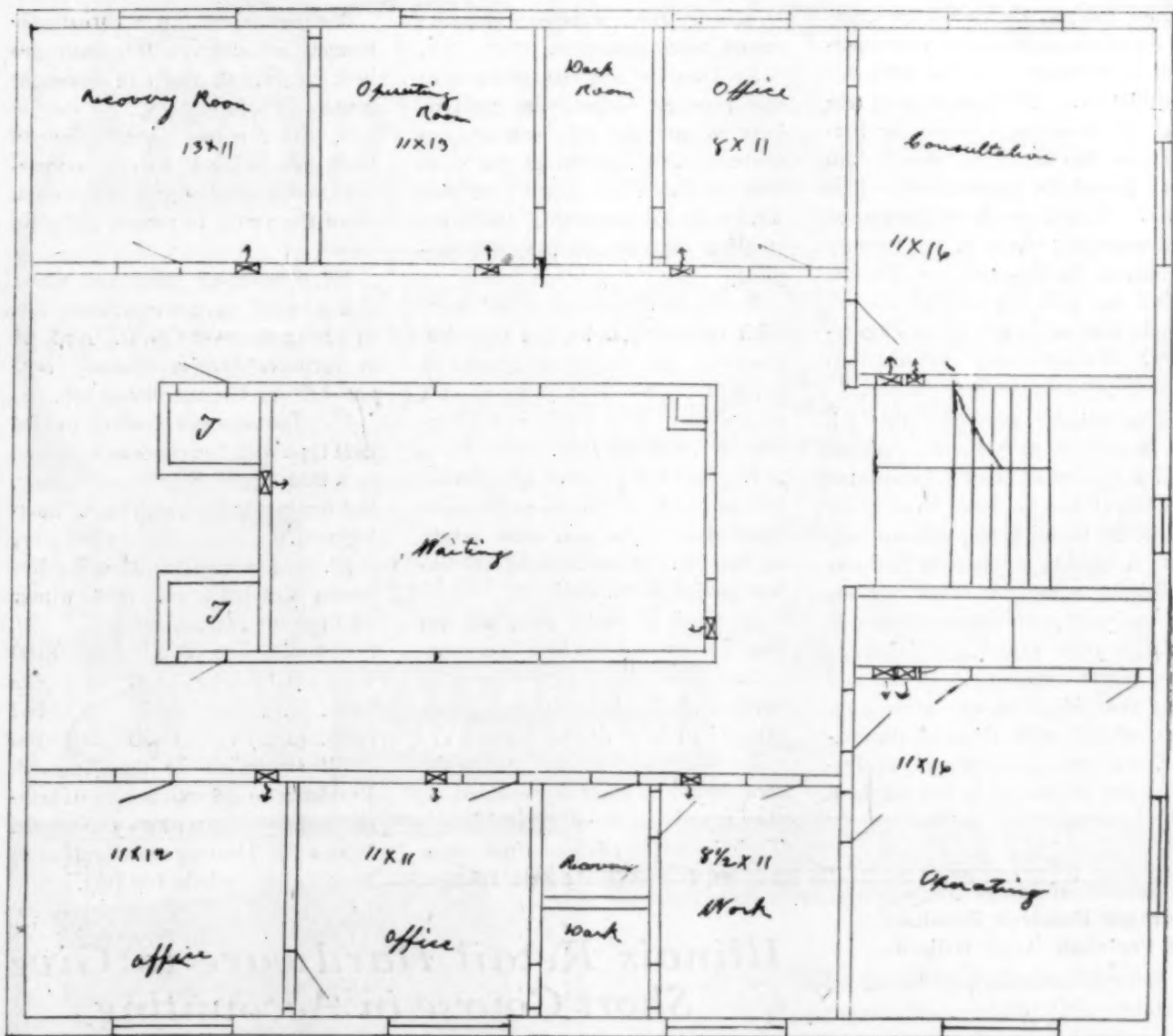
meanings of words and phrases. Thorough discussion of a project before actually putting it into opera-

tion brings out all of the weak points and undesirable features.

The entire system of American



Basement and First Floor Plan of Hospital Heated with a Warm Air Furnace. Note Location of Warm Air Ducts and Cold Air Returns



Second Floor Plan of Hospital Heated with Warm Air. Would You Have Placed the Warm Air Ducts and the Furnace as They Are Shown on These Plans if You Had Had This Job to Lay Out?

government is worked out with the aim to allow thorough debate and discussion before a bill is finally made into law.

A great deal of fun is poked at the executive who is affected with an acute case of "conferencitis." Of course there is, no doubt, a great deal of "hokum and bluffing" about the boss "being in conference," but the executive who subjects his ideas and projects to others about him before he puts them into actual operation must be given credit for at least using good judgment.

The warm air furnace installer, too, has found that he is not immune from the necessity of seeking the counsel of others on at least some of the problems that confront

him in his daily work. No matter how long he has been in the business of putting in warm air furnaces, he does not know it all. Until the time comes when all houses are so standardized that they can be classified in groups and sizes much in the same order as the sizes of a man's shirts, collars and socks are classified, each new job of heating any particular job will be a problem of its own. And there is no danger that the architects in this or any other country will allow standardization to progress that far.

The consequence is that no matter how many warm air furnaces any particular furnace man has put in, he is for ever coming up against a job with requirements peculiar to

itself—some peculiar circumstance that he has never met with before.

The greater number of these peculiar jobs he has stored away in his sub-conscious mind, the greater will be his development and the greater will be his value to the warm air heating industry. Constantly experiencing new difficulties and finding ways of circumventing those difficulties is the best developer of the human mind that is known. Reading about the experiences of others is next to actually experiencing them ourselves.

In the accompanying two illustrations are shown the basement, first and second floors of a hospital that is being heated with warm air. The location of the furnace and that of

all of the cold and warm air ducts is also shown. What, in your opinion, if anything is wrong with this installation? Confronted with the task of installing a warm air furnace in this building, would you have placed the furnace where it is now? Would you have distributed the warm air ducts in the manner shown on the illustrations? Do you think the cold air returns are of ample size to insure good circulation? Is their location and distribution to produce the best results?

The installer who puts this job in is anxious to have the opinion and judgment of other furnace men on this job. So let's have your ideas. By so doing you will not only help a brother in distress, but you will bring a valuable check into being on your own ideas. You will enlarge your experience. Conviction begets confidence. If you find that your ideas on any given subject coincide with those of the majority of men in your own profession, you are certain to feel the thrill of reassurance.

A Resume of Warm Air Furnace Research Results, by Professor A. C. Willard

Present investigation began in October, 1918, under a coöperative agreement between the manufacturers of warm air furnaces (N. W. A. H. & V. A.) and the University of Illinois. To date the Association has provided over \$50,000 in cash for salaries and operation, besides the Research Residence \$25,000 and the University has provided supervision, some assistance, laboratory facilities and has printed four bulletins representing at least \$25,000 more, making a grand total to date of \$100,000 in actual money.

The principal results:—

1. Accurate data on the performance of typical furnaces and furnace heating plants which served as the basis for the Standard Installation Code, now generally approved.

2. That the chimney draft available largely determines the capacity obtainable from a warm air furnace plant. Warm air = 175° at regis-

ters in coldest weather, at a 7.5 pound combustion rate.

3. That for a given grate area and type of furnace the ratio of heating surface (air contact) to grate surface determines the relative efficiency, ± 2 per cent unit 20:1 ratio as a standard. Radiation shield a valuable aid and easily applied.

4. Short direct return air ducts with no right angles are very important. The return air should be brought to base of furnace as cool as possible. May result in a difference of 15-20 per cent.

5. Stacks for warm air always run in inside partitions and leaders made short of as near same length as possible. None over 12'-0" unless special size is used.

6. Stack to leader ratio not less than 75 per cent for best operation. Capacity cut down in almost same ratio as stack: leader factor. May take 6" studs at times.

7. Boots and fittings and registers should be carefully selected, as they may be cause of great friction. Turbulence at elbows often more serious than ordinary pipe friction.

8. Furnace casing with cylinder bonnets and leaders from top are best. Lowhead room in basement usually interferes.

9. All furnaces should have a black iron lining 1" away from casing, and the smaller the cast-iron front the better to reduce radiation losses.

10. Smokepipe short and direct and covered since temperature loss in flue gases is very great. As 550° at furnace, 300° at chimney base and 125° or less at chimney top.

11. Temperature control of the dual type with one element in bonnet or a leader pipe gives best economy, and materially increases life of heating unit.

12. Relative costs of heating Research Residence for past winter 14.5 tons of coal and coke.

Soft coal	at \$ 6.50	= \$100
Coke (BP)	at 12.50	= 127
Anth. (d.C.)	at 16.50	= 162
Anth. (s.C.)	at 16.50	= 166

13. Insulation in the Research Residence to get uniformity of temperatures. — Courtesy National Warm Air Heating and Ventilating Association Bulletin for July.

Illinois Retail Hardware to Give Short Course in Accounting

**Course Will Start August 2 at Elgin—
Registrations Must Be Made by July 28**

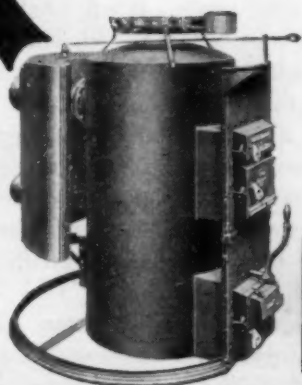
IT HAS been definitely decided by the Board of Directors of the Illinois Retail Hardware Association, that the projected short course in accounting will be held at Elgin, Illinois, starting Monday, August 2, the first session convening at 2 p. m. Arrangements have been made with the Ellis Business College to hold the school in one of their rooms, where the facilities necessary to the comfort and use of the student are available. Two sessions will be held each of the four remaining days of the course, the last session being on Friday afternoon. This will give the students an opportunity to return to their place of business for the usual Saturday rush.

Assurance has been given by the National office that Mr. I. E. Douglas, who is in charge of the accounting department there, will be on hand at Elgin during the entire week. Mr. T. F. Jurgeons, head of the Accounting Department of the Ellis Business College; Mr. P. G. Brown, chief accountant of the National Hardware Service Corporation; Mr. R. E. Ingold and Mr. P. M. Mulliken of the Association staff will also be present as instructors. With this number each student is assured of sufficient personal instruction to warrant his ability to successfully handle the accounting problems of a retail hardware store after he has completed the course.

The course of instruction will

**Saves
Fuel**

**Ten Year
Guarantee**



— due to its *large radiator*

FOLKS can see the difference in the Waterbury. They can *see why* its large radiator supplies extra heating capacity without extra fuel. That's one reason why the sales of the improved Waterbury are steadily increasing. And as the sales increase the number of boosters increase.

No one really wants any furnace that will not provide clean, warm, moist air in *every* room. *Sell them the Waterbury!* This coupon will quickly bring you full information.

Complete stocks carried in
Philadelphia, Pittsburgh,
Albany and Kansas City.

**WATERBURY
SEAMLESS FURNACE**
REG. U.S. PAT. OFF. PIPE OR PIPELESS

The
Waterman-
Waterbury Co.
1121 Jackson St. N. E.
Minneapolis Minn

Send me complete details of your agency proposition and a copy of "The Furnace Man's Handiest Manual."

Name _____

Address _____

EVERYTHING USED IN SHEET METAL WORK

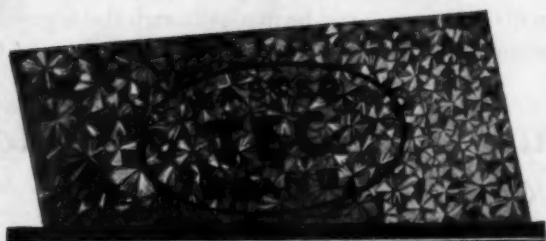
A Complete Stock Insures Prompt Shipment

In our warehouse you will find one of the most complete stocks in the country. Not only complete as to quantity but selected by men who have had many years of experience.

There are 12 men in our employ who have been with us a total of 261 years—an average of 22 years per man. It is the knowledge resulting from this experience that we offer you in Osborn Service.

The J. M. & L. A. OSBORN CO.
CLEVELAND

Buffalo Warehouse, 64-68 Rapin Street



The mark of superior quality on Galvanized Steel Sheets

INLAND "TEC" Master Brand Sheets

Inland "TEC" Master Brand sheets are now available. The Master Brand mark signifies that the sheets bearing it have been manufactured under the exacting specification of the Trade Extension Committee and are subject to constant inspection and test. Inland Master Brand sheets carry a double assurance of uniform quality; each sheet also carries the Inland brand mark.

INLAND STEEL COMPANY

General Offices: 38 South Dearborn Street, Chicago

Mills: Indiana Harbor, Ind., Chicago Heights, Ill., Milwaukee, Wis.

Branch Offices and Representatives

St. Paul Seattle St. Louis San Francisco Salt Lake City
Milwaukee Kansas City New Orleans Los Angeles



When writing mention AMERICAN ARTISAN—Thank you!

cover the various factors entering into retail accounting and will open on Monday afternoon with a lecture on the principles of accounting. In this will be included the reasons for keeping the records of business transaction and also the various kinds of records that are needed. The better and more simple ways of recording the various transactions will also be included in this discussion and the rest of the afternoon devoted to the study of the basic fundamentals upon which accounting is founded.

On Tuesday forenoon the practical study will be begun by taking up charge accounts and will include in this all of the different phases required in taking care of customer's accounts. Sales books will be provided and the student will make out the actual sales slip, taking the transaction through to completion, including entry in customer's ledger, the sending out of statements, closing of the account, and in addition the subject of credit terms, notes receivable, title retaining notes, leases and contracts will be studied. The student will also find out what the laws of the state of Illinois are pertaining to open book accounts, notes, judgments and he will also study the recent decision of the Illinois Supreme Court on the title retaining notes. Practically the entire afternoon will be devoted to practice on this part of store accounting.

Wednesday forenoon he will take up the daily record form of the N. R. H. A. accounting system by defining the seven control accounts of the business, and will discuss during the forenoon cash, income, disbursements and accounts receivable. In the afternoon the expense account will be taken up and the different kinds of expenses will be classified under suitable heads and will study these various factors of the expense account in the ratio of their importance to the business. The entire afternoon will be devoted to the practice and summing up of the forenoon's work.

On Thursday, the class will study the merchandise account including

both debits and credits. This will include the better method of handling the accounts payable and will also take up the matter of discounts, with a brief reference to banking. In connection the proper taking of inventory will be taken up and the lecture will touch also the method of marking your merchandise. These are not necessarily a part of book-keeping, but are so closely allied that it is justifiable to bring them before the student. The afternoon period will be devoted to practice and individual instruction as on the other days.

On Friday, the class will take up the various general ledger accounts that are incidental to every business and after this is completed will go into the study of the proper making of a profit and loss statement from which will also be made the income tax return. The closing of the books will follow and the class will also make up a correct financial statement of the business and prepare the opening entries for the new year's business.

On Friday afternoon there will be a brief review of the work covered during the week, with perhaps a short oral or written examination;

in order to determine those parts of the course which the student failed to grasp. In closing the week's work there will be a short lecture on "How to Analyze Your Business" from the records you have, and the possibilities of overcoming mistakes of the past. There can be no reason or justification of keeping any accounts of the business unless some practical value may be had to apply to the future business of the firm.

Although quite a good many hardware men have registered an interest for the school the enrollment is not filled as yet. It will be absolutely necessary that the student be registered not later than July 28, in order that preparations may be made for his coming and you are urged to write the secretary at once if you intend to attend the school or send an employee. There will be no tuition fee and no cost with the possible exception of a very small charge to cover the actual cost of the forms used by the student in the work. The local expenses of the student however, must be borne by the individual. Hotel reservations can be made through the Elgin office for any so desiring.

Annual Outing of Chicago Retail Hardware Men Big Success

Nothing Omitted to Make Event Most Enjoyable Affair—Ball Game Hotly Contested

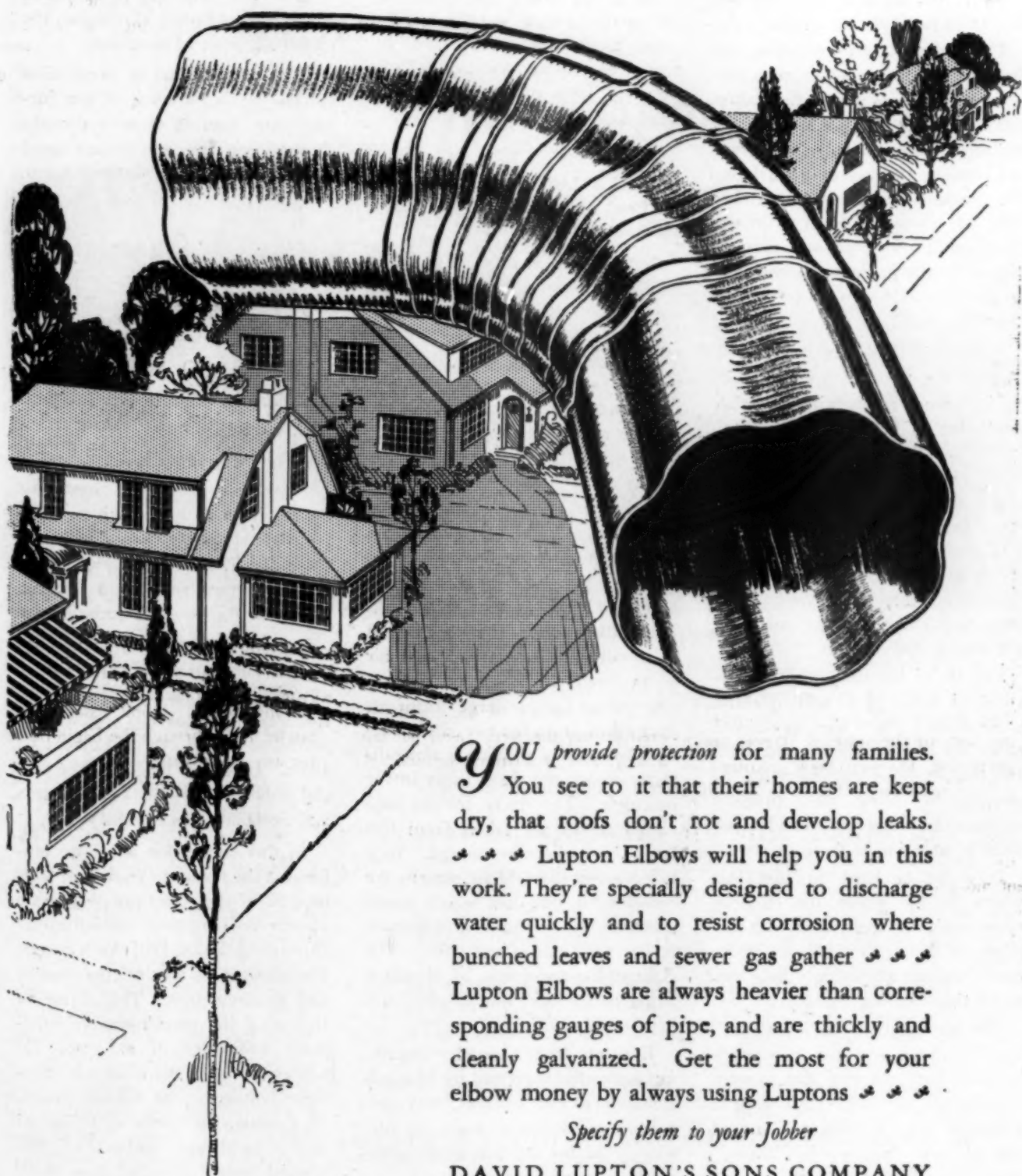
WEDNESDAY, July 14, may have a very important historical significance for the French people, but in Chicago hardware circles it had a significance all of its own. It was the day of days for the members of the Chicago Retail Hardware Association, their wives and especially their children. For that day was the day of the Chicago Retail Hardware Association annual picnic. The outing was held at Klein's Grove, Lincoln and Crawford Avenues.

The day was ideal for all of the activities usually engaged in at a picnic in the open—not too hot; not too cool, with beautiful clear skies.

Early in the morning baskets were packed to overloading and placed along with the "kids" into the family flivver. Arrived at the grove, the fun began.

It should be explained that this outing is the one and only place where the retail hardware dealers show any animosity for the salesmen who call upon them. All the venom that the retailers have stored up during the year finds an outlet in the annual ball game which takes place at the outing.

This year was no exception; in fact, the retailers came out with a determination to win the game this year. They were after blood, so



*Y*OU provide protection for many families.

You see to it that their homes are kept dry, that roofs don't rot and develop leaks.

*** Lupton Elbows will help you in this work. They're specially designed to discharge water quickly and to resist corrosion where bunched leaves and sewer gas gather ***

Lupton Elbows are always heavier than corresponding gauges of pipe, and are thickly and cleanly galvanized. Get the most for your elbow money by always using Luptons ***

Specify them to your Jobber

DAVID LUPTON'S SONS COMPANY
Allegheny Avenue and Tulip Street Philadelphia, Pa.

LUPTON

ELBOWS THAT FIT

Mention AMERICAN ARTISAN in your reply—Thank you!

to speak, and the fight which ensued made this fact very apparent.

This splendid determination on the part of the retailers was not without results, as with it they were able to trounce the salesmen. The salesmen fought gallantly, however, and showed themselves good losers. Perhaps the fact that Joe Goldberg, of Excelsior Steel Furnace Company, arrived too late to participate in the game had something to do with salesmen's losing the game this year.

The retail hardware dealers of Chicago not only excel in baseball, but in horse shoe throwing they also demonstrated their prowess. The fact is that they are so good at this latter sport that, as A. H. Kahlenberg, of Friedley-Voshardt Company, and A. A. Glessner, of Hart & Cooley Company, remarked while watching two of these past masters in their sport: "They only score when they make a 'ringer' and they are scoring 100 per cent."

But all of the time was not devoted to ball games and pitching horse shoes. There were games and races for the younger generation, and the old folks were as much interested in seeing their progeny compete and win as the children were in engaging in these sports.

It would be hard to say just where in the grove the children spent most of their time, but the lineup of kids for the free ice cream cones was an exceedingly long one at all times during the day.

The bar at which "2.75 per cent" was distributed was also very popular with both the men and women. Strange to say that each time a group of men congregated around the bar and had a few "foamy" ones, the effect seemed to be that they burst into song. Rain checks were given those who "hit the trail outside of the grove."

The fact remains that a good time was had by all who attended the outing. A great deal of thanks is due the committee in charge of arrangements for the outing for the manner in which they did their work.

The prizes offered the winners of the several events and the general prizes were all excellent, and revealed conclusive evidence of the excellent taste of the retail hardware men.

Kluegel & Lehmann, St. Paul, Have New Method of Installation

Now that the installation of warm air furnaces is getting down to a definite science, warm air furnace installers are beginning to polish off the rough spots in installation methods. They are using new methods to conserve as much of the heat from the furnace as possible and to get that heat up into the rooms above where it is wanted.

Among the furnace installers who have evolved new methods of getting the heat from the furnace up into the rooms with as little loss as possible is Kluegel & Lehmann, St. Paul, Minnesota. Their method is to remove the warm and cold air ducts from the basement and replace them by one large warm air duct taken from the top of the furnace bonnet and running it along directly under the floor joists in the basement. The ducts for the individual rooms are taken from this large duct wherever needed. In a like manner the cold air returns are combined in one duct which passes down to the bottom of the furnace in the most convenient point. The Kluegel-Lehmann way of installing moist air furnaces was patented November 23, 1925.

Excerpts from a circular describing both what is termed by Kluegel-Lehmann as the "old way" and their method of installing warm air furnaces contains the following information:

"It is important to take advantage of every correct principal in the installation of a furnace. To get good and economical results from any furnace, the heat must be transmitted to rooms with the least possible loss, but the system of installation must be correct to conserve this heat and deliver it to rooms with the least possible waste.

"The new Kluegel & Lehmann furnace installation eliminates the numerous pipes in basement.

"The new method of installation carries the full volume of the furnace rated heating capacity directly through one pipe and makes equal distribution to each individual room.

"The principal of this method of heating is based on a scientific fact that heat traveling in large volumes moves with greater velocity than if it were diverted into smaller separate channels."

American Wholesale Hardware Directory for 1926 Off Presses

Most everyone in the hardware industry has at some time or other had the privilege of perusing *Hardware News*, the official publication of the Pennsylvania and Atlantic Seaboard Hardware Association.

Beginning with the July number of that publication the subscription, advertising was taken over bodily to the *Hardware Journal* and will be published henceforth by Edward G. Baltz. It will no longer be the official publication of the Pennsylvania and Seaboard Association.

In this connection it might also interest the reader to know that Volume 12 of the American Wholesale Hardware Directory, published by Edward G. Baltz, 1701 Arch Street, Philadelphia, is also off the presses and in circulation. This directory is one of the most complete hardware directories in existence. It contains a list of the wholesale hardware houses of the United States, of Canada. It contains a list of heavy hardware jobbers of the United States, a list of New York exporters who handle hardware, a list of department stores who handle hardware and housewares. In the 130 pages which comprise the book are also included a list of manufacturers' agents of the United States.

As a reference book this directory should be in the hands of every retailer of hardware. The directory is being sold at \$2.50, postpaid.

The growing field for COPPER work



*Filling Station of
Olney Redmond,
Schenectady, N. Y.
The decorative
frieze is COPPER.*

In addition to the increasing use of COPPER for roofing, flashing and drainage purposes there is a growing demand for the metal in new types of construction.

The gasoline filling station shown above has a decorative COPPER frieze 350 feet long.

Structures of this type afford new opportunities for sheet metal contractors who feature COPPER work.

**COPPER & BRASS
RESEARCH ASSOCIATION
25 Broadway - New York**

Steel Market Is Making Good Record for July—Exceptional Volume of Business for this Season

Pig Iron Buying Wave Subsides—More Activity in Nonferrous Metal Market

CONSIDERING the season, the July steel market is proceeding with the same surprising show of sustained power that has made recent conditions almost without precedent in the industry. Some producers are pronouncing this July in point of renewing tonnage, to be the best they have ever experienced.

While buying is quieter, following the heavy specifications against contracts terminating July 1, the incoming tonnage since has been better than it seemed reasonable to expect and the accustomed dullness of the July-August period is not yet in sight.

A number of the mills, especially those in the Chicago district, find themselves with virtually 60 days' business on hand which, however, still is flexible enough to permit of substantial additions. Steel bar specifications at Chicago this month are 25 per cent ahead of June.

Notwithstanding the ragged price situation, sheet demand is declared to be fully up to normal with the exception of car building.

Production has snapped back after the holiday of the Fourth. This week it is practically back to the late June basis or 75 to 80 per cent.

Copper

For the first time in several months copper went well above 14.00 cents delivered, partly on account of refineries being pressed for shipments and unusually good consumption.

The strength also is attributed to the fact the export market has been stimulated by reports the new export association would be functioning soon.

Copper products have been in a steady market for months and it is expected that with just a little more

strength in copper an increase in product prices will be in order.

Zinc

Strength continues to be displayed in zinc and prices have jumped higher on stronger statistics and a higher ore market.

Prompt August metal is commanding anywhere from 7.50 cents to 7.55 cents East St. Louis and a higher level of prices is expected.

Lead

The American Smelting & Refining Co. today advanced its contract price on lead 15 points to 8.40 cents New York. This action followed continued strength in the market with moderate demand.

In the open market prompt August metal is quoted 8.50 cents to 8.52½ cents New York and 8.25 cents to 8.30 cents East St. Louis.

Inquiry for metal is good and indications are that the tightening up of the market will result in what is expected to be a large influx of business.

Tin

The New York market opened with traders bidding 62.00 cents for September, 61.87½ cents for October, 61.75 cents for November.

The market continues to be apparently entirely bare of orders or inquiries from consumers and that seems to have a very little effect on prices and the market closes strong, sellers very indifferent for orders and asking full prices.

Old Metals

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$17.50 to \$18.00; old iron axles, \$24.00 to \$24.50; steel springs, \$18.50 to \$19.00; No. 1 wrought iron, \$13.00 to \$13.50; No. 1 cast, \$16.00 to \$16.50, all per net tons. Prices for non-ferrous

metals are quoted as follows, per pound: Light copper, 9 cents; zinc, 5 cents, and cast aluminum, 19 cents.

Solder

Chicago warehouse prices on solder are as follows: Warranted 50-50, \$40.00; commercial 45-55, \$37.50, and plumbers', \$35.00, all per 100 pounds.

Pig Iron

Pig iron orders appear to be dwindling. Large inquiries are lacking. Several in the 500 to 1500-ton are coming out.

Additional sales of foundry and malleable within that range of tonnage are noted. The minimum price is \$17.75, base, valley, although one or two valley interests report a few sales at \$18, base.

Two makers quoting \$18.50, base, valley, are selling single carloads.

A local interest bought 1000 tons of malleable at \$17.75, valley.

The market for steelmaking iron is quiet. A steel castings manufacturer here closed for 1000 tons of bessemer iron at \$19.

Selling, however, still is on a high plane and in the past few days has been twice as heavy as in the corresponding period of June, when the buying movement was getting under way.

Northern No. 2 foundry and malleable iron are quoted at \$21, Chicago furnace, with the spot sales at \$21.50.

Charcoal iron has been more active, especially at Pittsburgh. Low phosphorus is inactive, at \$29.50 to \$30, delivered.

At Birmingham about three-fourths of the estimated output of pig iron in this district in the third quarter has been sold.

The price continues \$21 base.

Would You Shut Up Shop for Three Months?

When the first roller skates of spring clatter down suburban streets and the green begins to appear on the lean willow twigs, a curious madness seizes upon some people. They dictate a note to the general effect that their advertising will be cut in half or discontinued entirely during June, July and August. Having sent this note to their advertising agent or to a list of publications, they, in the manner of men who have accomplished a clever piece of work, set off for the links to try out the new mashie.

But we wonder if the men who dictate such notes in the spring realize what they are really saying to their own organizations. Some self-styled experts have maintained that advertising is 23 per cent less effective during the three summer months. This statement is not conceded but, in the manner of Hans Christian Anderson, let's suppose it is true. Were the owner of a business to weigh the effect on his own organization against that supposed saving, he would never send the note. What such a note actually says to the man's own organization is "Let's all take it easy. We are not going to make any effort to help make your selling easier, gentlemen of the sales force. Here, then, are three lovely months in which you may improve your golf game. Instead of going out hard after orders this July, why not get rid of that disconcerting slice which robs your drive of at least twenty yards in distance? Don't work, office boy. Go to the ball game. Use that new bathing suit at least three times a week, stenographer."

An order cutting down advertising effort is notice in advance that a period of undisturbed and restful calm is expected by the management. No need to rush about after prospects — here comes a period of comforting repose.

Don't write letters or make selling plans; go out in the woods to loll at leisure under a sycamore tree.

Don't work very hard; just drone and dawdle through the drowsy days ahead.

Relax. Let down. Be languid. Not much doing in the summer months, so take it easy.

If, when he was dictating a seasonal note to cut down his company's advertising effort, the president would consider himself posting around the plant sentiments like these, he might hesitate.

And now to add one serious word of advice to a somewhat satiric treatment of the dangerous habit of cutting off advertising effort in the summer months: Let all advertisers consider carefully what other concerns have done to knock out the so-called "summer slump" before they decide not to advertise.

Remarkable things have been accomplished by men who analyzed their markets and products more carefully, who refused to believe that customers spend three months in a hammock under the trees.

And every time real results in taking sales slumps out of summer have been attained, advertising has played a most important part.

This summer of 1926 of all summers during the past five years is most dangerous to the man who thinks he can cancel advertising and travel on momentum.

There will be ample business next fall for the people who keep after it during the dog days. But those misguided ones who serve notice on their whole organization to take it easy by cancelling advertising during the summer are going to discover when fall comes that consistent advertising and sales effort during this important summer have given their competitors a big head start.

*Editorial reprinted from
PRINTERS' INK*

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON

Chicago Foundry.....	\$22 00
Southern Fdy., No. 2, 27 01 28 01	
Lake Superior Charcoal....	29 04
Malleable	22 00

FIRST QUALITY BRIGHT TIN PLATES

IC 20x28 112 sheets....	\$25 10
IX 20x28.....	29 60
IXX 20x28 56 sheets....	16 20
IXXX 20x28.....	17 56
IXXXX 20x28.....	18 95

TERNE PLATES

IC 20x28, 40-lb. 112 sheets....	\$27 90
IX 20x28, 40-lb. 112 sheets....	36 90
IC 20x28, 25-lb. 112 sheets....	22 20
IX 20x28, 25-lb. 112 sheets....	25 20
IC 20x28, 20-lb. 112 sheets....	20 25
IV 20x28, 20 lb. 112 sheets....	23 00
IC 20x28, 15-lb. 112 sheets....	16 55

"ARMCO" INGOT IRON PLATES

No. 8 ga. up to and including	
1/4 in.—100 lbs.....	\$4 55

COKE PLATES

Cokes, 80 lbs., base, 20x28....	\$12 60
Cokes, 90 lbs., base, 20x28....	12 80
Cokes, 100 lbs., base, 20x28....	13 00
Cokes, 107 lbs., base, 1c	
20x28.....	13 30
Cokes, 135 lbs., base, 1A	
20x28.....	15 70
Cokes, 155 lbs., base, 56	
sheets.....	8 70
Cokes, 175 lbs., base, 56	
sheets.....	9 55
Cokes, 195 lbs., base, 56	
sheets.....	10 40

BLUE ANNEALED SHEETS

Base 10 ga.....per 100 lbs.	\$2 80
"Armco" 10 ga.....per 100 lbs.	4 00

ONE PASS COLD ROLLED BLACK

No. 18-20.....per 100 lbs.	\$3 90
No. 22-24.....per 100 lbs.	3 95
No. 26.....per 100 lbs.	4 00
No. 27.....per 100 lbs.	4 05
No. 28.....per 100 lbs.	4 10

GALVANIZED

"Armco" 28.....per 100 lbs.	\$6 70
No. 16.....per 100 lbs.	4 50
No. 18-20.....per 100 lbs.	4 65
No. 22-24.....per 100 lbs.	4 80
No. 26.....per 100 lbs.	4 95
No. 27.....per 100 lbs.	5 10
No. 28.....per 100 lbs.	5 25
No. 30.....per 100 lbs.	6 75

BAR SOLDER

Warranted	
50-50.....per 100 lbs.	40.00
Commercial	
45-55.....per 100 lbs.	37 50
Plumbers.....per 100 lbs.	35.00

ZINC

In Slabs.....	\$8 50
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SHEET ZINC

Cash Lots (600 lbs.).....	\$13 75
Sheet Lots.....	14 75

BRASS

Sheets, Chicago base.....	18% c
Mill base.....	18% c
Tubing, brazed base.....	22 1/2 c
Wire, base.....	19 1/2 c
Rods, base.....	16% c

COPPER

Sheets, Chicago base.....	22 1/2 c
Mill base.....	22 1/2 c
Tubing, seamless base.....	25 1/2 c
Wire No. 9 & 10, B & S	
Ga.....	20 1/2 c
Wire No. 11, B. & S. Ga.....	20 1/2 c

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

LEAD

American Pig	\$ 9.50
Bar	10 50

Sheet

Pig tin.....per 100 lbs.	69 00
Bar tin.....per 100 lbs.	70 00

TIN

Pig tin.....per 100 lbs.	69 00
Bar tin.....per 100 lbs.	70 00

ASBESTOS

Paper up to 1/16.....6c per lb.	
Roll board.....6 1/2 c per lb.	
Mill board 3/32 to 1/2.....6c per lb.	
Corrugated Paper (250	
sq. ft. to roll).....\$6.00 per roll	

BRUSHES

Hot Air Pipe Cleaning	
Bristle, with handle, each.....	\$0 85
Flue Cleaning	
Steel only, each.....	1 25

BURRS

Coppers Burrs only.....	45%
-------------------------	-----

CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 45
American Seal, 50-lb. cans, net	90
American Seal, 25-lb. cans, net	2 00
Asbestos, 5-lb. cans, net.....	45
Fecora.....per 100 lbs.	7 51

CHIMNEY TOPS

Iwan's Complete Rev. &	
Vent.....	30%
Iwan's Iron Mountain only.....	35%
Standard.....	30 to 40%

CLINKER TONGS

Front Rank, each.....	\$0 75
Per doz.....	8 40

CLIPS

Damper	
Acme, with tail pieces,	
per doz.....	\$1 25
Non Rivet tail pieces,	
per doz.....	25

COPPERS—Soldering Pointed Roofing

3 lb. and heavier.....per lb.	40c
2 1/2 lb.per lb.	45c
2 lb.per lb.	48c
1 1/2 lb.per lb.	55c
1 lb.per lb.	60c

CORNICE BRAKES

Chicago Steel Bending	
Nos. 1 to 6B.....	Net

CUT-OFFS

Kuehn's Korrekt Kutoffs:	
Galv., plain, round or cor. rd.	
standard gauge.....	40%
26 gauge.....	30%

DAMPERS

"Yankee" Hot Air	
7 inch, each 20c, doz.....	\$1 75
8 inch, each 25c, doz.....	3 40
9 inch, each 30c, doz.....	2 75
10 inch, each 32c, doz.....	3 00

Smoke Pipe

7 inch, each.....	\$0 25
8 inch, each.....	40
9 inch, each.....	50
10 inch, each.....	60
12 inch, each.....	90

Reversible Check

8 inch, each.....	\$1 50
9 inch, each.....	1 70

DIGGERS

Post Hole	
Iwan's Split Handle	
(Eureka)	
4-ft. Handle...per doz.	\$14 00
7-ft. Handle...per doz.	36 00
Iwan's Hercules pattern,	
per doz.....	14 90

EAVES TROUGH

Galv. Crimpedge, crated...75 & 5%	
-----------------------------------	--

ELBOWS

Conductor Pipe Milcor.

Galv., plain or corrugated,	
round flat Crimp.....	65%
Std. Gauge.....	60%
28 Gauge.....	40%
26 Gauge.....	40%
24 Gauge.....	10%

Square Corrugated

Standard Gauge.....	50%
No. 28 Gauge.....	45%
26 Gauge.....	30%

Portico Elbows

Standard Gauge Conductor Pipe,	
plain or corrugated.....	70 & 5%
Not nested.....	70 & 5%
nested solid.....	70 & 5%

ELBOWS—Stove Pipe

1-piece Corrugated, Uniform Blue	
"Milcor" No. 28 gauge.....	Doz.
5-inch.....	\$1 15
6-inch.....	1 25
7-inch.....	1 75

Special Corrugated

6-inch.....	\$1 00
7-inch.....	1 60

Adjustable—Uniform Blue

"Milcor" No. 28 Gauge, Uniform	
Blue.....	
5-inch.....	\$1 65
6-inch.....	1 75
7-inch.....	2 40

WOOD FACES—50% off list.

FENCE	
726-6-12% (100 rods).....	\$29 02
1948-6-14% (100 rods).....	44 08

FILES AND RASPS

Heller's (American).....	50-10%
American.....	60-10%
Arcade.....	50%
Black Diamond.....	40-10-5%
Eagle.....	50%
Great Western.....	50%
Kearney & Foot.....	50%
McClellan.....	50%
Nicholson.....	50%
Simonds.....	60%

FIRE POTS

Otto Berns Co.	
East of west boundary line of	
Province of Manitoba, Canada,	
No. Dakota, So. Dakota, Nebraska,	
Kansas, Oklahoma, Amarillo,	
San Angelo and Laredo,	
Texas.....	65%
West of above boundary	61%

Clayton & Lambert's

East of west boundary line of	
Province of Manitoba, Canada,	
No. Dakota, So. Dakota, Nebraska,	
Kansas, Oklahoma, Amarillo,	
San Angelo and Laredo,	
Texas.....	62%
West of above boundary line	48%

Geo. W. Diener Mfg. Co.

No. 02 Gasolene Torch, 1	
qt.....	\$ 5 55
No. 0250, Kerosene, or	
Gasolene Torch, 1 qt.,	7 50
No. 10 Tinner's Furn.	
Square tank, 1 gal.....	12 60
No. 15 Tinner's Furn.	
Round tank, 1 gal.....	12 00
No. 21 Gas Soldering Furn.	
nace.....	3 60
No. 110 Automatic Gas	
Soldering Furnace.....	10 50

Double Blast Mfg. Co.

Gasolene, Nos. 25 and 36.....	60%
-------------------------------	-----

Quick Meal Stove Co.

Vesuvius, F. O. B. St. Louis	30%
(Extra Dist. for large	
quantities)	

Chas. A. Hones, Inc.

Buzzer No. 1.....	\$ 9 00
Buzzer No. 2.....	12 00
Buzzer No. 22.....	13 50
Buzzer No. 42.....	15 00
Buzzer No. 43.....	19 00

GALVANIZED WARE

Pails (Galv. after made),	
10-qt.....	\$2 25
Tubs (Galv. after made),	
No. 1.....	6 35
No. 2.....	7 20

GLASS

Single Strength, A, 25-in.	
brackets.....	85%
Single Strength, A, 34 to 40-	
in. bracket.....	82%
Single Strength A, all other	
brackets.....	81%
Double Strength A, all sizes.....	82%

HANGERS

Conductor Pipe	
Milcor Perfection Wire.....	25%
Eaves Trough	
Milcor Eclipse Wire.....	15%
Milcor Triplex Wire.....	10%
Milcor Milwaukee Extension	10%
Milcor Steel (galv. after	
forming) List plus.....	12 1/4%
Milcor Selflock E. T. Wire,	
List plus.....	50%

HOOKS

Box	
V. & B. No. 1, each.....	\$0 26
Conductor	
Milcor	
"Direct Drive" Wrought	
Iron for wood or brick.....	15%

HAY

V. & B. No. 1, each.....	\$0 26
--------------------------	--------

HUMIDIFIERS

"Front-Range" Automatic	
In single lots.....	50%
In lots of 10 or more.....	50-5%
In lots of 25 or more.....	50-10%
Vapor pans, etc., each.....	50%

LIFTERS

Stove Cover	
Coppered.....per gro.	\$6 00
Alaska.....per gro.	4 75

MALLETS

Tinners	
Hickory.....per doz.	\$2 25

MITRES

Galvanized steel mitres, and	
caps, end pieces, outlets.....	30%
Milcor	
Galv. one piece stamped.....	40%

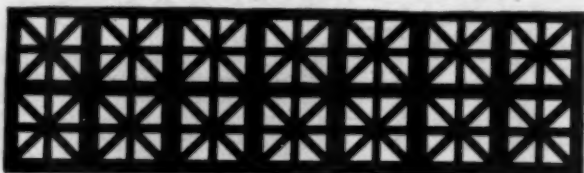
NAILS

Cut Steel.....	\$4 35
Cut Iron.....	4 35

Wire

Common.....	3 15
Cement Coated.....	2 25

(Continued on page 132)



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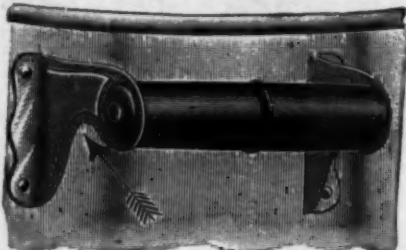


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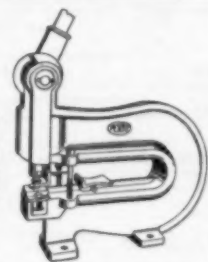
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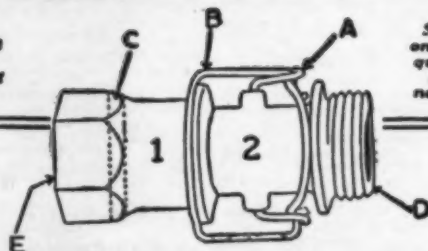


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Any yearly subscriber to AMERICAN ARTISAN may insert advertisements of not more than fifty words in our Want and Sales Columns WITHOUT CHARGE.

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For Sale—Tinning, plumbing and radiator shop also furnace. In town of 1,500. More work than one man can do the year around. Rent reasonable. Store is on main street. You don't have to buy tools unless you want them. Invoice about \$800.00. Reason for selling other business. In addition have a nice stock of tinware. Buyer may have these for \$300.00 down, rest easy payment to suit. Address X-10, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 1-3t

For Sale—Manufacturing business; manufacturing poultry equipment and other sheet metal specialties. Modern equipment, practically new, consisting of large and small presses, electric welder, double seamer, brakes and small machines. Orders ahead for next three months. A good opportunity for a good salesman and capable manager. For further information address X-14, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 2-3t

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Wanted—At once a man that can do work that comes in a country tin shop. Also some knowledge of plumbing. I will pay \$30.00 per week the year around for this kind of man. Address—O. L. Doward, Mt. Morris, Illinois. 1-3t.

Wanted—Furnace salesman for Winston-Salem, North Carolina; city of 75,000 population. Good wages for man that can get business. Address Farquar Heating & Ventilating Co., Greensboro, North Carolina. 3-3t

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Wanted—Tinner and handy man who can drive Ford truck. Married man preferred. State wages. Two furnished rooms. Address C. Eckhard, 512 East Broadway, Alton, Illinois. 3-3t

Wanted—First class sheet metal worker and furnace man. Address R. F. Boehm, 1105 Avery Street, Kenosha, Wisconsin. 2-3t

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Situation Wanted—Energetic trustworthy young man wishes to make change. Am capable of estimating furnace jobs, installing same, and do sheet metal work. Can sell and repair stoves; have had years of practical experience in the above lines. Wish to locate in Montana or Wyoming. Am married man with a family. Age 40 years. Prefer town where there is a Catholic church and school. At present am employed with employer for years. Address—X-7, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 26-3t.

Situation Wanted—Competent sheet metal worker of 13 years' experience desires to make a connection with a good reliable sheet metal shop or hardware store. Can lay out patterns and erect any sheet metal job or warm air heating system. Nothing but a steady year around proposition considered. Prefer Minnesota or neighboring states. Address X-3, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 26-6t

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SITUATION WANTED

Situation Wanted—By first class furnace man and sheet metal worker. Capable of supervising installers, some engineering experience. 14 years general experience. Can lay out and erect jobs in proper manner. State hours, wages in first letter. Address X-11, care AMERICAN ARTISAN, 620 South Michigan Avenue, Chicago, Illinois. 1-3t.

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LEARN HOW TO MARKET YOUR
ABILITY MORE SUCCESSFULLY

Our purpose is to discover—the up-and-coming Men of this Generation. Men who have 100% Ambition—who want to do things Big.

IT IS YOU WE WANT TO TRAIN TO BE A WINNER!

They pay Race Horse and Base Ball Trainers \$15,000 to \$25,000 a year—just to train them to Win.—Think of it, to Win?

WHO IS TRAINING YOU TO BE A WINNER?

Why not engage the ST. LOUIS TECHNICAL INSTITUTE to Train you in a Specialized way? We open up many highways to market your ability more successfully. The St. Louis Technical Institute delivers the goods express prepaid—therefore use the methods of Winners—not next year; but NOW.

Whether you are a Manufacturer, Contractor, Estimator, Foreman, Mechanic, or Apprentice—our Coaching Trains you to be a Winner—to make a quick get-a-way into better opportunities—to buy better things for your loved ones.

"I have amazed myself" writes one Student, "I started your Training last February, and now I am offered the position as Estimator in the Largest Shop in this City."

"I must tell you," writes another Student, "that you give so much for so little money—that every able tradesman can afford it."

"My Dear Wife is the Happiest person," writes another Student, "that I am taking this Training—she always used to have other women look down on me as inferior!"

COME! BE AN OUTSTANDING COMMERCIAL SUCCESS

Write today for full information in a Specialized Training in the following Course you check—Do it NOW—while you have 100% ambition. Date your Future from today. Full information is free.

- ☐ SHEET METAL DESIGN AND PATTERN DRAFTING.
- ☐ SPECIAL WARM AIR FURNACE HEATING.
- ☐ SHEET METAL CONTRACTING & ESTIMATING.
- ☐ FAN HEATING VENTILATING ENGINEERING.

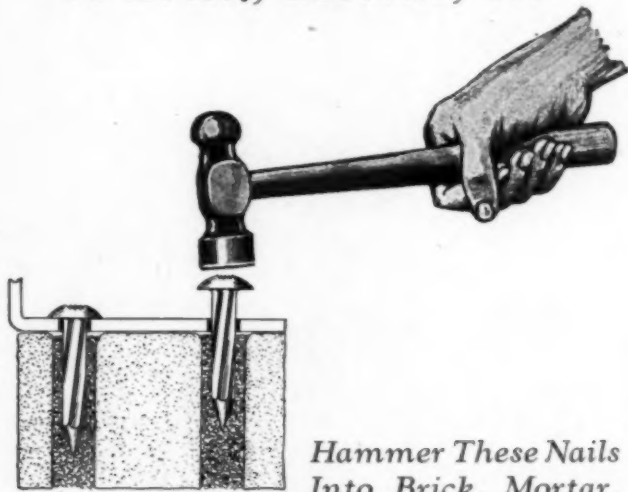
ST. LOUIS TECHNICAL INSTITUTE, O. W. Koths 4543 Clayton Ave., St. Louis, Mo. Prin.

Time-and-Labor-Saving Devices That Every Sheet Metal Worker Should Use

Parker-Kalon *Hardened* Masonry Nails

(PAT. FEB. 26, 1924.)

*For Making Fastenings
to Brick, Mortar, etc.*



*Hammer These Nails
Into Brick, Mortar,
Concrete, Etc., Like You Hammer
Ordinary Nails Into Wood!*

Can you imagine an easier and quicker way of making fastenings to masonry?

No wonder sheet metal workers, everywhere, are turning to this new method for such work as

Fastening leader and gutter pipe to brick walls;

Attaching cornices, flashings, etc., to brick walls and roofs;

Hanging ventilating pipes and ducts to brick and concrete walls and ceilings, and for dozens of other applications.

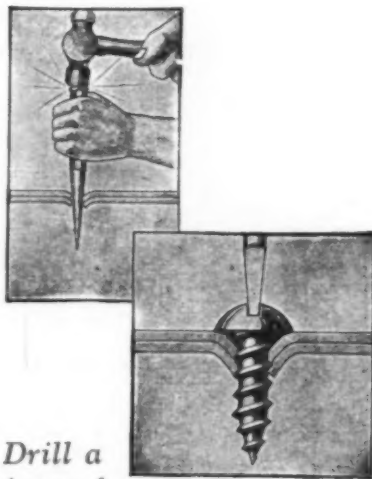
Parker-Kalon Hardened Masonry Nails enable them to do this work with savings of from 50% to 75% over other methods.

The Nails are made in three sizes $\frac{3}{16} \times 1\frac{1}{2}$ ", $\frac{1}{4} \times 1\frac{1}{2}$ " and $\frac{1}{4} \times 2$ ". Send for free samples and try them out. Take advantage of this opportunity to get acquainted with the latest Parker-Kalon time-and-labor-saving device.

PARKER-KALON HARDENED SELF-TAPPING Sheet Metal Screws

(PAT. APRIL 1, 1919 = MARCH 28, 1922)
(AUGUST 14, 1923 = FEBRUARY 10, 1925)

*For Joining Sheet Metal
and Making Fastenings
to Sheet Metal*



*Just Punch or Drill a
Hole in the Sections of
Sheet Metal to Be Joined and Turn This
Screw in With a Screw Driver!*

That's how simple it is to join sheet metal or make fastenings to sheet metal with PARKER-KALON Hardened Self-Tapping SHEET METAL SCREWS. Is it any wonder then that more than 35,000 sheet metal workers, cornice makers, roofers, etc., consider them indispensable in their daily work?

PARKER - KALON Hardened Self-Tapping SHEET METAL SCREWS are steel Screws which are hardened by a special process so that they cut a thread in the metal, like a tap, as they are being screwed in. Which explains why these Screws effect savings of from 50% to 75% in time and labor when used in place of stove bolts, tap bolts, rivets, etc.

They are made in six stock sizes with round and flat heads.

If you are one of the few metal workers who are not yet familiar with the time and labor these Screws save, send for samples and try them out. We wager you will never be without them thereafter.

*PARKER-KALON Time-and-Labor Saving PRODUCTS
ARE CARRIED IN STOCK BY MORE THAN 400 JOBBERS*

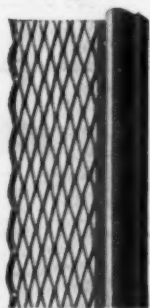
PARKER-KALON CORPORATION, 356 West 13th St., NEW YORK

Extra Sales—Extra Profits with the Complete MILCOR LINE

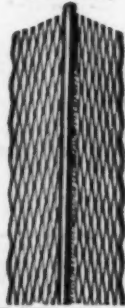


1. **Milcor "Titelock" Metal Tile.** Fire-Safe; Lightning-Safe; Weather-Safe. Titelock design tightly locks adjoining units, covering every nail and affording protection from rust. Lighter than slate or clay, this ideal good looking roofing does not require costly supporting structure. Made in various artistic styles: The Milcor Guide, contains detailed information.
2. **Milcor Sheet Roofing.** On the porch of the Legion Home, roofing formed of Milcor I. C. Terne Plates was used. These plates are Copper-bearing sheets and are covered by the special Milcor process with a heavy coating of pure tin and new lead, assuring unusual rust-resistance and durability.
3. **Milcor Cornices** were included in this sale, together with other staple Milcor rain carrying equipment.
4. **Milcor No. 5 Galvanized Bull Nose Window Stool** was used throughout the interior—neat, permanent, sanitary and safe.
5. **Milcor "Invisible Joint" Metal Ceilings**—also beautify the interior. The beauty, economy, permanence and ease of installation of these crack-free, fire-safe, permanent Ceilings make them the preferred type of ceiling in a wide variety of buildings—club-houses, stores, theatres, hotels, etc.
6. **Milcor "Expansion" Metal Casing (Patented)** This was used for the door and window trim, taking the place of old-fashioned, clumsy, unsanitary, expensive wooden casing and resulting in the neatest, most artistic and permanent door-and-window trim ever developed. "Expansion" Casing positively eliminates cleavage cracks at the juncture of wall and casing. Four styles of molding available.
7. **Milcor Netmesh Diamond Expanded Metal Lath.** Walls in the Legion Home were plastered on a base of Milcor Netmesh painted Metal Lath. Better Plastering on Milcor Metal Lath (Netmesh or Stay-Rib) insures safety and permanence.
8. **Milcor "Expansion" Corner Bead (Patented)** All plastered corners are protected by this unexcelled Milcor product. Precisely straight, true-lined corners, safe from bumps and abuse that would shatter ordinary plaster corners, are assured by the resilient "Expansion" wings of this bead.

MILCOR
EXPANSION
CASING No. 6-O.G.
(Patented)



MILCOR
EXPANSION
CORNER BEAD
(Patented)



The Legion Home, Chaviton, Ia.
Milcor Fire-safe Metal Products were
used extensively in its construction.

All for just this one building!

ALL of the Milcor Metal Products listed here were sold by one building supply dealer to be used in the construction of the one building shown above. A sizeable order, indeed! Profitable, too!

And yet, if this dealer had not been carrying the Milcor line he might have secured only a portion of this business—only a fraction of the profit he actually obtained. The completeness of the Milcor line however, and the speed of Milcor service, enabled him to make a complete sale and bigger profits.

Because of the popularity of the Milcor line—and its widespread acceptance by architects, contractors and builders, as the standard of quality—Milcor sales come easier and turnover is faster. Furthermore, the performance of Milcor Products insures lasting satisfaction, the basis of repeat business. For extra sales and extra profits send now for full particulars on Milcor Firesafe Products and the Milcor selling plan.

MILWAUKEE CORRUGATING COMPANY, Milwaukee, Wis.
CHICAGO, ILL. KANSAS CITY, MO. LA CROSSE, WIS.

MILCOR

METAL BUILDING PRODUCTS

FREE!

Send us your name on the coupon below and we will mail without obligation to you complete data on the Milcor Line, including two valuable books "The Milcor Manual" and "Milcor Architectural Sheet Metal Guide" describing in detail Milcor Fire-safe Building Products made from Steel, "Coppered Metal", ARMCO Ingot Iron, Pure Zinc and Pure Copper.



NAME

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